User’s Manual

Deva 16 & Deva 5.8



Deva 16

Portable Multi-track Digital Audio Recorder / Mixer

Firmware Version: 7.52
Updated: 1 June 2012

Maintained by: Ray M. Owen, PSM

NOTE: All specifications in this manual are subject to change without notice.

Zaxcom

230 West Parkway, Unit 9, Pompton Plains, NJ 07444 USA
Tel: 973-835-5000
www.zaxcom.com

Table of Contents

TABLE OF FIGURES 17

TABLE OF TABLES 18

CHAPTER 1 – INTRODUCTION 19
OVERVIEW 19
USER MANUAL CONVENTIONS 19
SYSTEM FEATURES 19
Deva-5.8 Specific 19
Deva-16 Specific 19
Common Features 20
WHAT'S INCLUDED WITH THE DEVA-5.8 20
Deva-5.8 Options 20
WHAT'S INCLUDED WITH THE DEVA-16 21
Deva-16 Options 21
DEVA SOFTWARE RECOMMENDATIONS 21
MEDIA / ACCESSORY RECOMMENDATIONS 21
Hard Disk Drives 21
CompactFlash Cards 21
FireWire Devices 22
Harddisk Drive 22
CompactFlash Reader/Drive 22
Keyboards 22
TOUCHSCREEN INTERFACE 22
ANALOG INPUTS 22
ANALOG INPUT LIMITER 22
DIGITAL INPUTS 22
MIXING 22
RECORDING 22
CAMERA / LINE IN CONNECTOR 22
Deva-5.8 22
Deva-16 23
METERING 23
FIREWIRE PORT 23
RF INTERFERENCE PROTECTION 23
TIMECODE 23
INPUT SAMPLING-RATE CONVERSION 23
SEQUENCE OF DEVA COMPONENTS 23
PRODUCT SUPPORT 24

CHAPTER 2 – EXTERIOR DESCRIPTION 25
FRONT PANEL DESCRIPTION 25
LEFT SIDE DESCRIPTION 27
RIGHT SIDE DESCRIPTION 29

CHAPTER 3 – SOFTWARE GUIDE 30
BOOT-UP SEQUENCE PAGE 30
Page Notes 30
Page Level Shortcuts 30
Boot Keys 30
MENU NAVIGATION 31
INDEX OF NOMAD PAGES 31
INDEX OF DEVA SCREEN OBJECTS 32
HOME PAGE 35
Page Notes 35
Page Level Shortcuts 35

Using the Deva front panel: 35
Using the Mix-12 embedded keyboard: 36
Using an attached keyboard: 36
Enter Segment data entry field 37
Enter Segment data entry field Shortcuts 37
Mode Status button 37
View button 37
Timecode button 37
Disk icon 37
Remaining Recording Time field 37
Battery icon button 37
Sampling-rate field 37
Timecode Frame-rate field 38
Pre-record Duration field 38
Headphone button 38
Mirror Drive Status button 38
Cur Segs Folder button 38
Cur field 38
Segs field 38
Folder field 38
S: T: N: button 39
Input (#) meters & buttons 39
Solo Mode 39
Arm / Disarm a Recording Track 39
MAIN MENU PAGE 40
Page Notes 40
Page Level Shortcuts 40
Mode Status button 40
Disk Mix button 40
Output Mix button 40
Faders button 40
Time Code button 40
Setup button 40
Input Configure button 40
My Deva button 41
Cue Mode button 41
Tone button 41
Head Phone Mix button 41
Scene Take Note button 41
About Deva button 41
Additional Functionality 41
DISK MIX PAGE 42
Page Notes 42
Page Level Shortcuts 42
Disk Mix matrix buttons 42
Slate buttons 42
Tone buttons 42
Preset button 43
(Analog / Digital) In Toggle button 43
(Pre- / Post-) Fader button 43
-MORE- button 43
Clear All button 43
Phase Invert button 43
Limiter Settings button 43
Limiting button 44
(Up / Down) Arrow button (Deva-16 only) 44
Limit buttons 44
DISK LIMITER SETTINGS PAGE 45
Page Notes 45
Page Level Shortcuts 45

Level meter *45*
Gain meter *45*
Attack button *45*
Attack button Shortcuts 45
Decay button *46*
Decay button Shortcuts 46
Thresh button *46*
Thresh button Shortcuts 46
Ratio button *46*
Ratio button Shortcuts 46
Gain button *46*
Gain button Shortcuts 46
Inc button *46*
Dec button *46*
OUTPUT MIX PAGE 47
Page Notes *47*
Page Level Shortcuts *47*
Output Mix matrix buttons *47*
Slate buttons *47*
Tone buttons *47*
Preset button *48*
(Analog / Digital) In Toggle button *48*
(Pre- / Post-) Fader button *48*
-MORE- button *48*
Clear All button *48*
Phase Invert button *48*
Limiter Settings button *48*
Output Limiting button *48*
Limit buttons *49*
Routing Presets button *49*
Output Routing button *49*
Play buttons 49
Stop buttons 50
Rec buttons 50
OUTPUT LIMITER SETTINGS PAGE 51
Page Notes *51*
Page Level Shortcuts *51*
Level meter *51*
Gain meter *51*
Attack button *51*
Attack button Shortcuts 51
Decay button *52*
Decay button Shortcuts 52
Thresh button *52*
Thresh button Shortcuts 52
Ratio button *52*
Ratio button Shortcuts 52
Gain button *52*
Gain button Shortcuts 52
Inc button *52*
Dec button *52*
OUTPUT ROUTING PRESETS PAGE 53
Page Notes *53*
Page Level Shortcuts *53*
Normal button *53*
Play Switches button *53*
Play Tracks 1-6, 15-16 button (Deva-16 only) *53*
Play Tracks 1-6, 9-10 button (Deva-5.8 only) *53*
Play Tracks 9-16 button (Deva-16 only) *53*
Play Tracks 3-10 button (Deva-5.8 only) *53*

Mute Play button ... 53
FADERS PAGE ... 54
Page Notes ... 54
Page Level Shortcuts ... 54
Input graphic faders ... 54
Input (#) meters & buttons ... 54
Arm / Disarm a Recording Track ... 54
Fader Assign button ... 54
Lock Faders button ... 54
(KNOB / TOUCH) FADER ASSIGN PAGE ... 55
Page Notes ... 55
Page Level Shortcuts ... 56
Knob Assign matrix buttons ... 56
Touch Fader Assign matrix buttons ... 56
Preset button ... 56
(Analog / Digital) In Toggle button ... 56
(Fader / ZaxNet Trim) button ... 56
Clear All button ... 56
Fader Assign Toggle button ... 56
TIMECODE PAGE ... 57
Page Notes ... 57
Page Level Shortcuts ... 57
Reader T.C. field ... 57
Reader U.B. field ... 57
Generator T.C. field ... 57
Generator U.B. field ... 57
Timecode Out button ... 57
Timecode Displayed button ... 58
Timecode Run Mode button ... 58
Frame Rate button ... 58
Enter Timecode button ... 58
Enter Timecode button Shortcuts ... 58
Enter User Bits button ... 58
Enter User-Bits button Shortcuts ... 58
Increment User Bits button ... 58
JAM T.C. button ... 58
JAM U.B. button ... 58
JAM Date button ... 58
JAM Time button ... 58
DUAL RATE TIMECODE ... 58
TIMECODE RUN MODE PAGE ... 59
Page Notes ... 59
Page Level Shortcuts ... 59
Timecode Runmode buttons ... 59
Auto JAM Date at Midnight button ... 59
SETUP PAGE ... 60
Page Notes ... 60
Page Level Shortcuts ... 60
Sample Rate button ... 60
Record Channels button ... 60
Pre-Record Time button ... 60
Tone Level button ... 60
Operating Modes button ... 60
Meters button ... 60
Headphone Options button ... 60
Clock button ... 60
Memory button ... 61
Mix12 button ... 61
ZaxNet button ... 61

User Interface button 61
Service button 61
SAMPLE RATE PAGE 62
Page Notes 62
Page Level Shortcuts 62
Sample-rate buttons 62
Sample Rate Reference button 62
RECORD TRACK SELECT PAGE 63
Page Notes 63
Page Level Shortcuts 63
Two Track button 63
Four Track button 63
Tracks Mixed To button 63
All Tracks button 63
Tracks to Record buttons 63
OPERATING MODE PAGE 64
Page Notes 64
Page Level Shortcuts 64
Transport Operation button 64
GPi1 Remote Roll button 64
Serial Remote Roll button 64
Serial Port Mode button 64
Slate Source button 65
B-Format button 65
Command Monitor button 65
REMOTE COMMAND MONITOR PAGE 66
Page Notes 66
Page Level Shortcuts 66
METER MENU PAGE 67
Page Notes 67
Page Level Shortcuts 67
Number of Home Screen Meters button 67
Meter Vertical / Horizontal button 67
Color Schemes button 68
Meter Labels button 68
Display Inputs button 68
Display Outputs button 68
Meter Mode button 68
Meter Assigns button 68
METER LABELS PAGE 69
Page Notes 69
Page Level Shortcuts 69
Meter (#) Label buttons 69
Meter (#) Label buttons Shortcuts 69
INPUT METER MENU PAGE 70
Page Notes 70
Page Level Shortcuts 70
Input Level meters 70
OUTPUT METER MENU PAGE 71
Page Notes 71
Page Level Shortcuts 71
Output Level meters 71
METER ASSIGNMENTS PAGE 72
Page Notes 72
Page Level Shortcuts 72
Meter (#) Assignment buttons 72
METER (#) ASSIGNMENT PAGE 73
Page Notes 73
Page Level Shortcuts 73

Meter Insertion Point buttons ... 73
Channel to Meter buttons ... 73
HEADPHONE OPTIONS PAGE ... 74
Page Notes ... 74
Page Level Shortcuts ... 74
Headphone Alarm Tone button ... 74
Headphone Mix button ... 74
Mute Unrecorded Tracks button ... 74
HEADPHONE MIX PAGE ... 75
Page Notes ... 76
Page Level Shortcuts ... 76
Preset Loaded Name field ... 76
Disk Tracks matrix buttons ... 76
Outputs matrix buttons ... 76
Camera Returns matrix buttons ... 76
(Disk Tracks / Outputs / Camera Returns) Toggle button ... 76
Factory Presets button ... 76
User Presets button ... 76
Toggle On Recorded Tracks button ... 77
Phase Invert button ... 77
FACTORY PRESETS PAGE ... 78
Page Notes ... 78
Page Level Shortcuts ... 78
Preset (#) buttons ... 78
(LOAD / SAVE) USER PRESETS PAGE ... 79
Page Notes ... 79
Page Level Shortcuts ... 79
Preset (#) buttons ... 79
Load/Save Toggle button ... 79
TIME/DATE PAGE ... 80
Page Notes ... 80
Page Level Shortcuts ... 80
Time field ... 80
Date field ... 80
Set Time button ... 80
Set Time button Shortcuts ... 80
Set Date button ... 80
Set Date button Shortcuts ... 80
Time mode button ... 81
Date mode button ... 81
Daylight Savings Time button ... 81
MEMORY PAGE ... 82
Page Notes ... 82
Page Level Shortcuts ... 82
Restore Factory Defaults button ... 82
MIX12 SETUP PAGE ... 83
Page Notes ... 83
Page Level Shortcuts ... 83
Mix-12 Support button ... 83
Meter Brightness button ... 83
Tone Button Assign button ... 83
Fader Channel Assignment button ... 83
ZAXNET SETUP PAGE ... 84
Page Notes ... 84
Page Level Shortcuts ... 84
ZaxNet Enable button ... 84
Transport Slaved button ... 84
Power Roll button ... 84
USER INTERFACE SETTINGS PAGE ... 85

Page Notes ... *85*
Page Level Shortcuts ... *85*
Start-Up Screen button ... *85*
Hold Key Time button ... *85*
False Start button ... *85*
Default STN Edit Position button ... *85*
Color Theme button ... *86*
Big STN button ... *86*
Backlight Brightness button ... *86*
Location button ... *86*
INPUT CONFIGURE PAGE (ANALOG INPUTS SELECTED) ... 87
Page Notes ... *87*
Page Level Shortcuts ... *87*
Analog (#) buttons ... *87*
(Analog / Digital / Line Lvl) Inputs Toggle button ... *87*
High Pass Filter button ... *87*
Enabling the Highpass Filter ... 87
Mic/Line Level button ... *88*
Clear All button ... *88*
Adjust Delay button ... *88*
High Pass (#) Hz button ... *88*
High Pass (#) Hz button Shortcuts ... 88
Adjust Trim button ... *88*
ANALOG INPUT (#) PAGE ... 89
Page Notes ... *89*
Page Level Shortcuts ... *89*
(Mic / Line) Level button ... *89*
48V (On / Off) button ... *89*
Setting Phantom Power ... 89
Delay button ... *89*
Delay button Shortcuts ... 89
HPF button ... *90*
HPF button Shortcuts ... 90
Limiter (On / Off) button ... *90*
Trimmer graphic fader ... *90*
Level meter ... *90*
Digital Output button ... *90*
Dynamics button ... *90*
EQ button ... *90*
BUS button ... *90*
Mix12 Input Trim Select button ... *90*
ANALOG INPUT (#) – DYNAMICS PAGE ... 91
Page Notes ... *91*
Page Level Shortcuts ... *91*
Level meter ... *91*
Gain meter ... *91*
Compress (On / Off) button ... *91*
Attack button ... *91*
Attack button Shortcuts ... 91
Decay button ... *92*
Decay button Shortcuts ... 92
Thresh button ... *92*
Thresh button Shortcuts ... 92
Ratio button ... *92*
Ratio button Shortcuts ... 92
Gain button ... *92*
Gain button Shortcuts ... 92
Copy Compress button ... *92*
Inc button ... *92*
Dec button ... *93*

ANALOG INPUT (#) – EQ PAGE 94
Page Notes *94*
EQ page Level Shortcuts *94*
EQ Memory view Shortcuts *95*
(Band / Notch) (#) field *95*
Level field *95*
Level field Shortcuts 95
(BYPASSED / INLINE) flag *95*
Band Type flag *95*
Freq field *95*
Freq field Shortcuts 95
Q field *95*
Q field Shortcuts 95
Equalization graph *95*
Band (#) buttons *96*
Notch (#) buttons *96*
Entry Mode button *96*
ANALOG INPUT (#) – BUS PAGE 97
Page Notes *97*
Page Level Shortcuts *97*
Disk Channel (#) buttons *97*
Output Channel (#) buttons *97*
INPUT CONFIGURE PAGE (DIGITAL INPUTS SELECTED) 98
Page Notes *98*
Page Level Shortcuts *98*
Digital (#) buttons *98*
(Analog / Digital / Line Lvl) Inputs Toggle button *98*
High Pass Filter button *98*
Enabling the Highpass Filter 98
Clear All button *98*
Adjust Delay button *99*
High Pass (#) Hz button *99*
High Pass button Shortcuts 99
Adjust Trim button *99*
DIGITAL INPUT (#) PAGE 100
Page Notes *100*
Page Level Shortcuts *100*
Delay button *100*
Delay button Shortcuts 100
HPF button *100*
HPF button Shortcuts 100
Trimmer graphic fader *100*
Level meter *101*
Dynamics button *101*
EQ button *101*
BUS button *101*
Mix12 Input Trim Select button *101*
DIGITAL INPUT (#) – DYNAMICS PAGE 102
Page Notes *102*
Page Level Shortcuts *102*
Level meter *102*
Gain meter *102*
Compress (On / Off) button *102*
Attack button *102*
Attack button Shortcuts 102
Decay button *102*
Decay button Shortcuts 103
Thresh button *103*
Thresh button Shortcuts 103
Ratio button *103*

Ratio button Shortcuts 103
Gain button *103*
Gain button Shortcuts 103
Copy Compress button *103*
Inc button *103*
Dec button *103*
DIGITAL INPUT (#) – EQ PAGE 104
Page Notes *104*
EQ page Level Shortcuts *104*
EQ Memory view Shortcuts *105*
(Band / Notch) (#) field *105*
Level field *105*
Level field Shortcuts 105
(BYPASSED / INLINE) flag *105*
Band Type flag *105*
Freq field *105*
Freq field Shortcuts 105
Q field *105*
Q field Shortcuts 105
Equalization graph *105*
Band (#) buttons *105*
Notch (#) buttons *106*
Entry Mode button *106*
DIGITAL INPUT (#) – BUS PAGE 107
Page Notes *107*
Page Level Shortcuts *107*
Disk Channel (#) buttons *107*
Output Channel (#) buttons *107*
INPUT CONFIGURE PAGE (LINE LVL INPUTS SELECTED) (DEVA-16 ONLY) 108
Page Notes *108*
Page Level Shortcuts *108*
Line Level Channel buttons *108*
(Analog / Digital / Line Lvl) Inputs Toggle button *108*
Route Line Lvl Input button *108*
Clear All button *108*
(ANALOG / DIGITAL) INPUT DELAY PAGE 109
Page Notes *109*
Page Level Shortcuts *109*
Channel (#) buttons *109*
More Delay button *109*
Less Delay button *109*
Enter Delay button *109*
Enter Delay button Shortcuts 109
Clear Delay button *109*
Delay Mode button *110*
Adjusting the Delay *110*
(ANALOG / DIGITAL) INPUT TRIM PAGE 111
Page Notes *111*
Page Level Shortcuts *111*
Input (#) Trim fields *111*
Input (#) Level meters *111*
Less Gain button *111*
More Gain button *111*
Clear Trim button *111*
Select All button *111*
Adjusting the Trim *111*
MY DEVA PAGE 112
Page Notes *112*
Page Level Shortcuts *112*

Internal HD drive button ... *112*
Internal HD drive Status button ... *112*
Mirror Drive button ... *112*
Mirror Drive Status button ... *112*
Mirror Drive Select button ... *112*
Firewire Power button ... *112*
INTERNAL DISK UTILITIES PAGE ... 113
Page Notes ... *113*
Page Level Shortcuts ... *113*
Erase Current Folder button ... *113*
Current Folder button ... *113*
Delete Last Segment button ... *113*
Format Drive button ... *113*
DISK FOLDERS PAGE ... 114
Page Notes ... *114*
Page Level Shortcuts ... *114*
Folder buttons ... *114*
Up Arrow button ... *114*
Sort Order button ... *114*
Page Up button ... *114*
Enable Mirror Playback button ... *114*
Page Down button ... *115*
Name Folder button ... *115*
Name Folder button Shortcuts ... 115
Down Arrow button ... *115*
Erase Folder button ... *115*
FOLDER "???" CONTENTS PAGE ... 116
Page Notes ... *116*
Page Level Shortcuts ... *116*
#:# Segs field ... *116*
Take buttons ... *116*
Up Arrow button ... *116*
Page Up button ... *116*
Enter Seg # button ... *116*
Enter Seg # button Shortcuts ... 116
Page Down button ... *116*
Edit STN (Scene, Take, Note) button ... *116*
Down Arrow button ... *117*
FORMAT MENU WARNING PAGE ... 118
Page Notes ... *118*
Page Level Shortcuts ... *118*
Format Drive button ... *118*
Do Not Format Drive button ... *118*
FORMATTING DIALOG BOX ... 119
Page Notes ... *119*
Page Level Shortcuts ... *119*
MIRROR DRIVE PAGE ... 120
Page Notes ... *120*
Page Level Shortcuts ... *120*
Segment number data entry field ... *120*
Segment number data entry field Shortcuts ... 120
File Type button ... *120*
File Resolution button ... *120*
Format Drive button ... *120*
Tracks to Mirror button ... *120*
Folder to Mirror button ... *121*
Start Seg button ... *121*
End Seg button ... *121*
Mirror Mode button ... *121*

Advanced Options button ... 121
Mirror Drive Status button ... 121
MIRROR FILE TYPE PAGE ... 122
Page Notes ... 122
Page Level Shortcuts ... 122
File Type buttons ... 122
Pull Up / Down buttons ... 122
FORMAT MIRROR DRIVE CAUTION PAGE ... 123
Page Notes ... 123
Page Level Shortcuts ... 123
Format Drive FAT32 button ... 123
Do Not Format Drive button ... 123
TRACKS TO MIRROR PAGE ... 124
Page Notes ... 124
Page Level Shortcuts ... 124
Tracks to Mirror buttons ... 124
MIRROR FOLDERS PAGE ... 125
Page Notes ... 125
Page Level Shortcuts ... 125
Folder buttons ... 125
Up Arrow button ... 125
Sort Order button ... 125
Page Up button ... 125
Page Down button ... 125
Mirroring Mode button ... 125
Down Arrow button ... 125
ADVANCED MIRROR OPTIONS PAGE ... 126
Page Notes ... 126
Page Level Shortcuts ... 126
Timecode Offset button ... 126
Write Sound Report button ... 126
CUE MODE PAGE ... 127
Page Notes ... 127
Page Level Shortcuts ... 127
Enter Segment data entry field ... 127
Enter Segment data entry field Shortcuts ... 127
Mode Status button ... 127
View button ... 128
Timecode button ... 128
Disk icon ... 128
Remaining Recording Time field ... 128
Battery icon button ... 128
Prev Seg button ... 128
Next Seg button ... 128
Enter Seg button ... 128
<< REW button ... 128
>> FFWD button ... 129
Cue Toggle button ... 129
Set ZaxNet UB button ... 129
Wireless ReRec button ... 129
Wireless Audition button ... 129
Cur Segs Folder button ... 129
Cur field ... 129
Segs field ... 129
Folder field ... 129
S: T: N: button ... 129
Input (#) meters & buttons ... 129
Arm / Disarm a Recording Track ... 130
SCENE TAKE NOTE PAGE ... 131

Page Notes *131*
Page Level Shortcuts *131*
Enter Segment data entry field *131*
Enter Segment data entry field Shortcuts 131
#:# Segs field *132*
Scene button *132*
Scene button Shortcuts 132
Inc Scene button *132*
Take button *132*
Take button Shortcuts 132
Reset Take button *132*
Note button *132*
Note button Shortcuts 132
Store Note button *132*
Clear Note button *132*
Segment button *132*
Segment button Shortcuts 132
Left Arrow button *132*
Right Arrow button *132*
Stored Note buttons *132*
Up Arrow button *133*
Down Arrow button *133*
ABOUT DEVA PAGE 134
Page Notes *134*
Page Level Shortcuts *134*
KEYBOARD PAGE 135
Page Notes *135*
Page Level Shortcuts *135*
Bsp button *135*
Ent button (Enter) *135*
Shift button *135*
Caps button *135*
Left Arrow button *135*
Right Arrow button *136*
BATTERY MENU PAGE 137
Page Notes *137*
Page Level Shortcuts *137*
Low Battery Voltage button *137*
Low Battery Voltage button Shortcuts 137
Reset Graph button *137*
Battery Type field *137*
Voltage field *137*
Voltage vs. Time graph *137*
HEADPHONE VOLUME PAGE 138
Page Notes *138*
Page Level Shortcuts *138*
Headphone Linear graphic fader *138*
FALSE START DIALOG 139
Page Notes *139*
Page Level Shortcuts *139*
Folder field *139*
Segment field *139*
Duration field *139*
Scene field *139*
Take field *139*
Mark it button *139*
Cancel button *139*
Delete it button *139*
DEVA SERVICE MENU WARNING PAGE 140

Page Notes *140*
Page Level Shortcuts *140*
Software Options button *140*
Processor Speed button *140*
Load ProgFile button *140*
Load From CD-R button *140*
Burn Program ROM button *140*
DEBUG SCREEN DIALOG BOX 141
Page Notes *141*
Page Level Shortcuts *141*
*B AND *P DIAGNOSTIC FLAGS 142
**B Flag* *142*
**P Flag* *142*

CHAPTER 4 – SETTING UP THE POWER AND AUDIO CONNECTIONS 143
POWER 143
Internal Power *143*
External Power *143*
Battery Display *143*
Battery Chemistry 143
Setting the Battery Threshold *143*
TIME AND DATE 144
ANALOG / DIGITAL AUDIO INPUTS 144
Switching Between Mic- and Line-Level Input (Analog Only) *145*
Enabling the High Pass Filter (Analog / Digital) *145*
Setting the High Pass Filter value 145
Setting the High Pass Filter Frequency on Multiple Channels 145
Enabling 48 VDC Phantom Power (Analog Only) *145*
Adjusting the Trim (Analog / Digital) *145*
Adjusting the Trim using the Analog / Digital Input Trim page 145
Adjusting Individual Trim Levels Using the Input (#) page 146
Adjusting the Delay (Analog / Digital) *146*
Adjusting the Delay Using the Input Delay page 146
Adjusting the Delay Using the Input (#) page 146
ANALOG AUDIO OUTPUTS 146
DIGITAL AUDIO OUTPUTS 147
CAMERA / LINE IN CONNECTOR 147
Deva-5.8 .... *147*
Deva-16 .... *147*
Configuring Analog Inputs 9 – 12 (Deva-16 only) *147*
ASSIGNING INPUTS TO RECORDING TRACKS AND OUTPUTS 148
Assigning Inputs to Recording Tracks *148*
Setting the Number of Tracks Recorded *148*
Set the Sampling-rate for Recorded Tracks *148*
Assign Inputs to Output Channels *148*
OVERVIEW OF INPUT SIGNALS 149
OVERVIEW OF OUTPUT SIGNALS 149

CHAPTER 5 – SETTINGS FOR RECORDING 150
STORING THE DATA 150
Selecting a folder *150*
SETTING THE PRE-RECORD DURATION 150
SET THE TONE LEVEL AND DESTINATIONS 150
Set the Tone output *150*
Enable the Tone *150*
HOME PAGE METERS 150
Set the Number of Meters *151*
Set the Meter Labels *151*
Change the Meter's Appearance *151*
Change the Meter Orientation 151

Meter Color Schemes 151
Screen Backlight Brightness *151*
MONITORING WITH HEADPHONES 151
Fader #8 ..... *151*
Load a Factory Preset *152*
Build Your Own Headphone Mix (Working Preset) *152*
Invert Phase 152
Retaining Your Headphone Mix with a User Preset *152*
Storing the Mix in a User Preset 152
Loading a Mix Saved in a User Preset 152
Camera Input (Deva-5.8 only) *152*
TIMECODE PAGE 154
Timecode Displayed on the Home page *154*
Timecode Output *154*
Entering User-bit Data *154*
Entering Timecode *154*
Frame-rate *154*

CHAPTER 6 – USING ZAXNET 155
ZAXNET SETUP 155
ZAXNET ENABLE 155
SLAVED / NON-SLAVED OPERATION 155
TRANSMITTER GAIN SETUP 155
WIRELESS AUDITION & WIRELESS RE-RECORD 156

CHAPTER 7 – NEW SYSTEM CAPABILITIES 157
INTRODUCTION 157
IMPROVEMENTS 157
Power Roll feature *157*
Folder Recovery function *157*
New Processor Speed Selection feature *157*
Saving and restoring Deva's configuration INI files *157*
Simultaneous Mirror feature *158*
"Mirror All Folders" feature *158*
KNOWN FIRMWARE ISSUES 158

CHAPTER 8 – SHORTCUT KEYS 159
COMMON DATA ENTRY FIELD SHORTCUTS LIST 159
Keyboard Keys *159*
Front Panel Keys *159*
COMMON KEYBOARD PAGE SHORTCUTS LIST 159
FRONT PANEL SHORTCUTS 159
MIX-12 EMBEDDED KEYBOARD SHORTCUTS 160
ATTACHED KEYBOARD SHORTCUTS 160
BOOT-UP SHORTCUTS 161
Page Level Shortcuts *161*
Boot Keys *161*
HOME PAGE SHORTCUTS 161
Using the Deva front panel: *161*
Using the Mix-12 embedded keyboard: *162*
Using an attached keyboard: *162*
DISK LIMITER SETTINGS PAGE SHORTCUTS 163
OUTPUT LIMITER SETTINGS PAGE SHORTCUTS 163
Attack button Shortcuts *163*
Decay button Shortcuts *163*
Thresh button Shortcuts *163*
Ratio button Shortcuts *163*
Gain button Shortcuts *163*
TIMECODE PAGE SHORTCUTS 163

Enter Timecode button Shortcuts *163*
Enter User Bits button Shortcuts *164*
METER LABELS PAGE SHORTCUTS 164
Meter (#) Label buttons Shortcuts *164*
TIME/DATE PAGE SHORTCUTS 164
Set Time button Shortcuts *164*
Set Date button Shortcuts *164*
INPUT CONFIGURE PAGE SHORTCUTS 164
High Pass (#) Hz button Shortcuts *164*
(ANALOG / DIGITAL / LINELVL) INPUT (#) PAGE SHORTCUTS 164
Delay button Shortcuts *164*
HPF button Shortcuts *164*
(ANALOG / DIGITAL) INPUT (#) – DYNAMICS PAGE SHORTCUTS 164
Attack button Shortcuts *164*
Decay button Shortcuts *164*
Thresh button Shortcuts *165*
Ratio button Shortcuts *165*
Gain button Shortcuts *165*
(ANALOG / DIGITAL) INPUT (#) – EQ PAGE SHORTCUTS 165
Level field Shortcuts *165*
Freq field Shortcuts *166*
Q field Shortcuts *166*
EQ Memory view Shortcuts *166*
(ANALOG / DIGITAL) INPUT (#) – BUS PAGE SHORTCUTS 166
(ANALOG / DIGITAL) INPUT DELAY PAGE SHORTCUTS 166
Enter Delay button Shortcuts *166*
DISK FOLDERS PAGE SHORTCUTS 166
Name Folder button Shortcuts *166*
FOLDER "???" CONTENTS PAGE SHORTCUTS 166
Enter Seg # button Shortcuts *166*
MIRROR DRIVE PAGE SHORTCUTS 166
Start Seg field Shortcuts *166*
End Seg field Shortcuts *166*
CUE MODE PAGE SHORTCUTS 167
Enter Segment data entry field Shortcuts *167*
SCENE TAKE NOTE PAGE SHORTCUTS 167
Enter Segment data entry field Shortcuts *167*
Scene button Shortcuts *167*
Take button Shortcuts *167*
Note button Shortcuts *167*
Segment button Shortcuts *167*
BATTERY MENU PAGE SHORTCUTS 167
Low Battery Voltage button Shortcuts *167*
HEADPHONE VOLUME PAGE SHORTCUTS 168
DEBUG SCREEN (1967) PAGE SHORTCUTS 168

CHAPTER 9 – EQUIPMENT SPECIFICATIONS 169

CHAPTER 10 – CONNECTOR PINOUTS 173
POWER CONNECTOR (XLR-4) 173
HEADPHONE OUTPUT CONNECTOR (1/4" STEREO PLUG) 173
ANALOG INPUT / OUTPUT CONNECTORS (XLR-3) 174
ANALOG OUTPUT CONNECTOR (DB-25) 175
SERIAL/GPI CONNECTOR (DB-9) 175
LINE IN / CAMERA CONNECTOR (HIROSE-10) 176
Deva-5.8 .... *176*
Deva-16 .... *176*
TIMECODE CONNECTOR (LEMO-5) 177
AES DIGITAL INPUT / OUTPUT CONNECTORS (DB-15) 177

CHAPTER 11 – FIRMWARE INFORMATION 178
FIRMWARE 178
Advantages to Upgrading the Firmware 178
Upgrading the Firmware in Each Unit 178
FIRMWARE HISTORY 180

CHAPTER 12 – ZAXCOM WARRANTY POLICY AND LIMITATIONS 183

Table of Figures

FIGURE 2-1 FRONT PANEL IMAGE 25
FIGURE 2-2 LEFT SIDE IMAGE 27
FIGURE 2-3 DEVA-16 & DEVA-5.8 RIGHT SIDE IMAGES 29
FIGURE 3-1 BOOT-UP SEQUENCE PAGE 30
FIGURE 3-2 HOME PAGE 35
FIGURE 3-3 MAIN MENU PAGE 40
FIGURE 3-4 DISK MIX PAGE 42
FIGURE 3-5 DISK MIX – LIMITER COLUMN PAGE 44
FIGURE 3-6 DISK LIMITER SETTINGS PAGE 45
FIGURE 3-7 OUTPUT MIX PAGE 47
FIGURE 3-8 OUTPUT MIX – LIMIT COLUMN PAGE 49
FIGURE 3-9 OUTPUT MIX – OUTPUT ROUTING COLUMNS PAGE 49
FIGURE 3-10 OUTPUT LIMITER SETTINGS PAGE 51
FIGURE 3-11 OUTPUT ROUTING PRESETS PAGE 53
FIGURE 3-12 TOUCH FADER PAGE 54
FIGURE 3-13 KNOB / TOUCH FADER ASSIGN PAGE 55
FIGURE 3-14 TIMECODE PAGE 57
FIGURE 3-15 TIMECODE RUN MODE PAGE 59
FIGURE 3-16 SETUP PAGE 60
FIGURE 3-17 SAMPLE RATE PAGE 62
FIGURE 3-18 RECORD TRACK SELECT PAGE 63
FIGURE 3-19 OPERATING MODE PAGE 64
FIGURE 3-20 COMMAND MONITOR PAGE 66
FIGURE 3-21 METER MENU PAGE 67
FIGURE 3-22 EXAMPLES OF HOME PAGE LAYOUTS 67
FIGURE 3-23 EFFECTS OF THE COLOR SCHEMES BUTTON 68
FIGURE 3-24 METER LABELS PAGE 69
FIGURE 3-25 INPUT METER MENU PAGE 70
FIGURE 3-26 OUTPUT METER MENU PAGE 71
FIGURE 3-27 METER ASSIGNMENTS PAGE 72
FIGURE 3-28 METER (#) ASSIGNMENT PAGE 73
FIGURE 3-29 HEADPHONE OPTIONS PAGE 74
FIGURE 3-30 HEADPHONE MIX PAGE (PART 1) 75
FIGURE 3-31 HEADPHONE MIX PAGE (PART 2) 76
FIGURE 3-32 FACTORY PRESETS PAGE 78
FIGURE 3-33 (LOAD / SAVE) USER PRESETS PAGE 79
FIGURE 3-34 TIME/DATE PAGE 80
FIGURE 3-35 MEMORY PAGE 82
FIGURE 3-36 MIX-12 SETUP PAGE 83
FIGURE 3-37 ZAXNET SETUP PAGE 84
FIGURE 3-38 USER INTERFACE SETTINGS PAGE 85
FIGURE 3-39 EFFECTS OF THE COLOR THEME BUTTON 86
FIGURE 3-40 EFFECTS OF THE BIG STN BUTTON 86
FIGURE 3-41 INPUT CONFIGURE PAGE (ANALOG INPUTS SELECTED) 87
FIGURE 3-42 ANALOG INPUT (#) PAGE 89
FIGURE 3-43 ANALOG INPUT (#) - DYNAMICS PAGE 91
FIGURE 3-44 ANALOG INPUT (#) - EQ PAGE 94
FIGURE 3-45 ANALOG INPUT (#) - BUS PAGE 97
FIGURE 3-46 INPUT CONFIGURE PAGE (DIGITAL INPUTS SELECTED) 98

FIGURE 3-47 DIGITAL INPUT (#) PAGE 100
FIGURE 3-48 DIGITAL INPUT (#) - DYNAMICS PAGE 102
FIGURE 3-49 DIGITAL INPUT (#) - EQ PAGE 104
FIGURE 3-50 DIGITAL INPUT (#) - BUS PAGE 107
FIGURE 3-51 INPUT CONFIGURE PAGE (LINE LEVEL INPUTS SELECTED) 108
FIGURE 3-52 (ANALOG / DIGITAL) INPUT DELAY PAGE 109
FIGURE 3-53 (ANALOG / DIGITAL) INPUT TRIM PAGE 111
FIGURE 3-54 MY DEVA PAGE 112
FIGURE 3-55 INTERNAL DISK UTILITIES PAGE 113
FIGURE 3-56 DISK FOLDERS PAGE 114
FIGURE 3-57 FOLDER "???" CONTENTS PAGE 116
FIGURE 3-58 FORMAT MENU WARNING PAGE 118
FIGURE 3-59 FORMATTING DIALOG BOX ON TOP OF FORMAT MENU WARNING PAGE 119
FIGURE 3-60 SCREEN DISPLAY OF THE PRIMARY DRIVE FORMAT PROCESS 119
FIGURE 3-61 MIRROR DRIVE PAGE 120
FIGURE 3-62 MIRROR FILE TYPE PAGE 122
FIGURE 3-63 FORMAT MIRROR DRIVE PAGE 123
FIGURE 3-64 TRACKS TO MIRROR PAGE 124
FIGURE 3-65 MIRROR FOLDERS PAGE 125
FIGURE 3-66 ADVANCED MIRROR OPTIONS PAGE 126
FIGURE 3-67 CUE MODE PAGE 127
FIGURE 3-68 SCENE TAKE NOTE PAGE 131
FIGURE 3-69 ABOUT DEVA PAGE 134
FIGURE 3-70 GENERIC KEYBOARD PAGE 135
FIGURE 3-71 BATTERY MENU PAGE 137
FIGURE 3-72 HEADPHONE VOLUME PAGE 138
FIGURE 3-73 FALSE START DIALOG ON TOP OF HOME PAGE 139
FIGURE 3-74 DEVA SERVICE MENU PAGE 140
FIGURE 3-75 DEBUG SCREEN PAGE 141
FIGURE 10-1 XLR-4F POWER CONNECTOR PIN NUMBERING 173
FIGURE 10-2 HEADPHONE PLUG CONNECTIONS 173
FIGURE 10-3 XLR-3M (LEFT) AND XLR-3F (RIGHT) AUDIO INPUT & OUTPUT CONNECTOR PIN NUMBERING 174
FIGURE 10-4 DB-25M ANALOG OUTPUT CONNECTOR PIN NUMBERING 175
FIGURE 10-5 MINI DB-9 15M SERIAL/GPI CONNECTOR PIN NUMBERING 175
FIGURE 10-6 HIROSE-10M LINE IN / CAMERA CONNECTOR PIN NUMBERING 176
FIGURE 10-7 LEMO-5M TIMECODE CONNECTOR PIN NUMBERING 177
FIGURE 10-8 MINI DB-15M DIGITAL INPUT AND OUTPUT CONNECTORS PIN NUMBERING 177
FIGURE 11-1 FIRMWARE INSTALL PART 1 179
FIGURE 11-2 FIRMWARE INSTALL PART 2 179

Table of Tables

TABLE 3-1 INDEX OF NOMAD PAGES 31
TABLE 3-2 DISK ICON COLOR CODE 37
TABLE 3-3 INDICATOR DESCRIPTIONS 42
TABLE 3-4 INDICATOR DESCRIPTIONS 47
TABLE 3-5 INDICATOR DESCRIPTIONS 56
TABLE 3-6 INDICATOR DESCRIPTIONS 97
TABLE 3-7 INDICATOR DESCRIPTIONS 107
TABLE 3-8 MIRROR STORAGE MEDIA FORMAT TIME 123
TABLE 3-9 DISK ICON COLOR CODE 128
TABLE 10-1 XLR-4F PIN DESCRIPTION 173
TABLE 10-2 HEADPHONE PLUG PIN DESCRIPTION 173
TABLE 10-3 XLR-3 PIN DESCRIPTION 174
TABLE 10-4 DB-25M PIN DESCRIPTION 175
TABLE 10-5 MINI DB-9M PIN DESCRIPTION 175
TABLE 10-6 HIROSE 10-PIN DESCRIPTION 176
TABLE 10-7 LEMO-5M PIN DESCRIPTION 177
TABLE 10-8 MINI DB-15M PIN DESCRIPTION 177

Chapter 1 – Introduction

Overview

The Zaxcom Deva is a high-resolution audio mixer and recorder for reality television surround recording and ENG. Lightweight and power efficient, it replaces multiple mixers and portable recorders that are currently used to mix audio for recording to camera via RF link or hardwired cable.

The Deva has an extensive software and hardware history based on the continuous refinement of our location recording technology.

The functions of mixing, recording and audio effects are seamlessly integrated providing features, functionality and audio quality unobtainable with separate solutions. Deva's eight mix busses are a perfect match for the new generation of ENG cameras that record four to eight tracks of audio.

The Deva is ideal for use with Holophone™ and SoundField™ microphones.
This section describes the Deva's physical features and their location.

User Manual Conventions

Throughout this manual, the following conventions are used:

- **button** – refers to an on-screen (VIRTUAL) object that represents a parameter that can be changed and/or viewed.
- **CF card** – refers to any CompactFlash card that meets the tests outlined in ***CompactFlash Cards*** {**p.21**}.
- **cycle** – is used when the selection rotates through several different possible selections.
- **cycle the power** – refers to turning power to the unit 'OFF', waiting a few seconds and then turning the power 'ON'.
- **default setting** – refers to the value that is loaded into the associated parameter, in the event that the ***Restore Factory Defaults button*** {**p.82**} is pressed. The value is highlighted.
- **key** – refers to a PHYSICAL object on the unit for the Operator to change and/or view a parameter or to navigate through the menu pages.
- (A key) **+** (B key) – Simultaneously press the two keys.
- **(key press shortcut sequence)** – It is necessary to move through the menu pages to get to the page where changes are to be made. The most efficient way to indicate this is through the sequence of keys/buttons to be pressed. For example: (***SHIFT*** + ***SETUP*** *keys* → ***Meters*** *button*) means to simultaneously press the ***SHIFT*** and ***SETUP*** *keys* then press the ***Meters*** *button* in the page that is displayed.
- {**p.##**} – refers to the page number on which the item is described.
- **toggle** – is used when the selection switches between two possible selections.

NOTE: A green **NOTE** is a helpful hint or bit of information.

IMPORTANT: A blue **IMPORTANT** note indicates something more important than a green NOTE.

CAUTION: A yellow **CAUTION** note indicates a situation that, if ignored, could cause a significant problem.

WARNING: A red **WARNING** note indicates a situation that, if ignored, could cause damage to you, your equipment and/or your reputation.

System Features

Deva-5.8 Specific

- 10 recording tracks
- 10-pin Hirose connector for direct connection to supported cameras
- 6 analog outputs

Deva-16 Specific

- 16 recording tracks
- 10-pin Hirose connector for an additional 4 line-level analog inputs
- 8 analog outputs

Common Features

- Tracks are recorded onto an internal hard-disk drive
- Track archiving is available using:
  - Internal CompactFlash™
  - Internal DVD-RAM drive
  - External FireWire™ 400 device
- Bit-depth: 24-bits
- Timecode frame-rates available: 23.98, 24, 25, 29.97NDF, 29.97DF, 30NDF, 30DF
- Sample-rates available (KB): 44.1, 47.952, 48, 48.048, 88.2, 96, 96.096, 192
- 8 analog mic / line inputs with 48V phantom power, each 10 mA max
- 8 digital inputs
- 8 digital outputs
- 8 hardware faders
- Built-in 16-channel mixer
- Mix to disk or outputs, pre- or post-fader, with or without phase inversion
- The Deva makes it possible for you to keep your recorded audio on the set, allowing Production to instantly reference previous recordings. Disputes with Post regarding recording issues can be cleared up immediately and extra copies of recorded audio can be produced in case of lost, damaged or stolen material.
- Record to an external FireWire device without an additional computer.
- It can generate 4 versions of AES-31 Broadcast Wave Format files for use in Post:
  - Polyphonic – 24-bit
  - Polyphonic – 16-bit
  - Monophonic – 24-bit
  - Monophonic – 16-bit
- The Deva offers direct Avid and ProTools compatibility. This saves a tremendous amount of time loading files for Post Production.
- Metadata (Scene, Take, Note, Roll Number) can be entered into the Deva using the touchscreen display, Mix-12 control surface, Cameo mixer or external keyboard. This data is contained within the audio recording and is transferred with the audio into the Avid Post Production system. All metadata can be easily edited on the Deva to assure Post gets the correct information for each Take.
- The Deva supports the FAT-32 disk format. Archive media created using the Deva is directly accessible using either Macintosh or Windows computers without the necessity of using third-party software drivers.
- Lightweight rugged design
- Weight: 7.4 lbs (2.76 kg) without battery
- Size, while looking at the screen (H x W x D): 3.78" x 10.8" x 8.1" (96 mm x 274.3 mm x 205.7 mm)
- Battery runtime: up to 6 hours on a Lithium-Ion NP1
- Full color, backlit graphic liquid crystal display – daylight viewable

What's included with the Deva-5.8

- Hard-disk drive in caddy case (Primary Storage)
- CompactFlash slot (Secondary Storage)
- Built-in DVD-RAM drive (Archive Storage)
- FireWire 400 connection (for External Storage)
- AES input/output cables
- External 110/220 volt power supply
- Effects package (EQ, notch filter, compressor and delay on each channel)
- CD-ROM containing this PDF User's Manual

Deva-5.8 Options

- Spare HD caddy case
- Deva HD caddy to USB adapter
- PortaBrace bag
- Six channel analog output cable
- Mix-8
- Mix-12

What's included with the Deva-16

- Hard-disk drive in caddy case (Primary Storage)
- CompactFlash slot (Secondary Storage)
- Built-in DVD-RAM drive (Archive Storage)
- FireWire 400 connection (for External Storage)
- AES input/output cables
- Channel 9 – 12 analog input cable
- External 110/220 volt power supply
- Effects package (EQ, notch filter, compressor and delay on each channel)
- CD-ROM containing this PDF User's Manual

Deva-16 Options

- Spare HD caddy case
- Deva HD caddy to USB adapter
- PortaBrace bag
- Eight channel analog output cable
- Mix-8
- Mix-12

Deva Software Recommendations

The currently recommended versions are:

- The latest version on the Zaxcom website.
- 7.52
- 6.03U
- 5.44O

WARNING: Do **NOT** use any version before 5.44O.

Media / Accessory Recommendations

Hard Disk Drives

We currently ship the Western Digital WD1600BEVE 2.5" 160GB drive (they're currently available on Amazon.com).

CompactFlash Cards

We recommend SanDisk and Transcend cards. Don't use cards with "double write speed" features. Any modern card, 8 GB and larger, should work equally well. Do not use cards from questionable manufacturers as they will wear out quickly due to the lack of a good wear leveling algorithm.

If you are planning to record at 96 kHz or 192 kHz, choose a card that claims 10 MB per second SUSTAINED write speed (MAX write speed does NOT count).

Once you have the cards in hand, you should test their ability to keep up with the recording process:

- sampling-rates lower than 96 kHz – record all tracks for 10 minutes with pre-record set to 10 seconds at a higher sampling-rate than you expect to use.
- sampling-rates 96 kHz and 192 kHz – record 6 – 8 tracks for 10 minutes with pre-record set to 10 seconds at the desired sampling-rate.

If the unit kicks out of record, the card could not keep up.

Also, after recording, check how long the ***Disk*** *icon* (on the ***Home page*** {**p.35**}) stays **Red** after you press the ***STOP*** *key*. It should stay **Red** for about 0.5 seconds as it finishes writing the last bit of data to the card. If it stays **Red** for 1 second or more, you will want to be careful to not go into record while it is still **Red**, otherwise the Deva may become confused (nothing serious, it just may still say Stop in the ***Home page*** {**p.35**} while it's still recording with the ***REC*** *key* lit up).

FireWire Devices

Harddisk Drive

We recommend Lacie drives, at the moment. From the Apple store the G-Tech Mini Drive and Smartdisk Firelite have been reported to work.

Some FireWire drives may need to have the ***Firewire Power*** *button* cycled to have them recognized. Some non-bus powered drives still require FireWire Power to be ON in order to work reliably.

CompactFlash Reader/Drive

The Lexar FireWire 800 with an 800 → 400 cable has been reported to work.

Keyboards

Here are our recommendations:

- PS/2 keyboard from Cherry Corp: G84-4100LCMUS-2 from ***www.cherrycorp.com***
- 89-Key Mini-USB Keyboard from Micro Center: 810739 from ***www.MicroCenter.com***

Touchscreen Interface

Deva's full color touchscreen interface is the key to ultimate functionality. It provides instant control of over 300 mixer cross-points and over 200 user parameters. It's easy to read in direct sunlight and offers a lock feature to prevent accidental operation.

Analog Inputs

Deva incorporates eight very low noise, low distortion microphone preamps with 48V phantom power. Many Emmy® and Oscar® winning productions have been recorded with the Zaxcom preamp. The transformerless design enhances audio quality by eliminating low frequency distortion common in transformer-based microphone preamps. Each of the eight inputs can be switched between mic-level and line-level operation and feature a powerful 48V phantom power supply.

Analog Input Limiter

The Deva's analog input limiter prevents high-level audio from clipping the A/D converter in the analog domain.

Digital Inputs

The Deva has four AES input pairs with sample-rate conversion, allowing each input to have a different sampling-rate. This is key on location, where it's not always possible to lock external AES sources.

Mixing

Deva can mix sixteen inputs to eight output busses and record up to sixteen tracks* on the internal hard-disk drive. The mixer has infinite routing capability. Any input can be routed to any output pre-fader, post-fader, with or without the phase inverted. The Mix-12 control surface can also be used to form an all digital location recording and mixing package.

* Deva-5.8 – maximum 10 tracks, Deva-16 – maximum 16 tracks

> **NOTE:** Deva does all of the mixing, the attached Mix-8 / Mix-12 is a control surface only and does not do any mixer processing. The connection between the Deva and the Mix-8 / Mix-12 carries control surface communications only.

Recording

The Deva records to the Primary Drive using the Mobile Audio Recording Format (MARF) II. MARF was developed to be fault tolerant, ensuring that should power be lost while recording, ALL audio up to that point will be recoverable. The MARF system and its audio-centric operation have eliminated several of the reliability issues associated with FAT32 recording.

While the backup process is enabled, the audio files are copied to the Mirror Drive, which is in standard FAT32 format. The Mirror media can be given to Post or copied to any computer.

Camera / Line In Connector

Deva-5.8

The Camera connector (10-pin Hirose) connects directly to the 10-pin Hirose audio connector located on most cameras, providing a two-channel camera feed (a copy of line outputs 5 & 6) and a mono audio return. In addition,

with the appropriate cabling, it can be connected through an STA100/150 Stereo Adapter to a TRX900AA transmitter to provide a two-channel camera RF link with return audio and timecode transmission.

All audio connections are balanced line-level, which eliminates the mic level ground loop noise common in FM wireless systems. It outputs the signal at 0 dBu, making it directly compatible with most cameras without the use of external amplification.

Deva-16

The Line In connector (10-pin Hirose) provides for line-level inputs 9 – 12. When activated they are patched into and replace digital inputs 1 – 4, respectively.

Metering

The Deva provides metering of all input channels and output busses in four different formats, based on user preference. Channel metadata is superimposed on meters to aid in meter identification. Signal levels are color coded to aid in rapid identification of overload conditions. Touching a meter selects individual channels for PFL solo monitoring.

FireWire Port

The Deva acts as a master to control and supply power for an external FireWire device.

RF Interference Protection

The Deva was designed from the ground up to operate in close proximity to sensitive receivers. Wireless devices can coexist in the sound bag with the Deva running from the same power source.

Timecode

A full-featured SMPTE timecode interface is standard. All common frame-rates and timecode sampling-rates are supported. In addition, the Deva includes the auto-load function, allowing the unit to automatically enter Record and Stop modes based on incoming timecode. Be aware, unlike other manufacturer's equipment, the Deva's timecode clock continues to run and maintain accurate timecode after the power is turned 'OFF'.

Input Sampling-rate Conversion

The Deva will accept any unlocked AES signal with a sampling-rate of 44.1 to 192 kHz. The dynamic range of the sample-rate conversion is 124 dB, offering completely transparent conversion of digital audio from one sample-rate to another.

Sequence of Deva Components

To better aid the user in using and understanding his Deva recorder, the following list describes the Analog to Analog sequence for each component that sees your audio:

1. Input connector
2. Input Limiter
3. Input Gain
4. Analog-to-Digital Converter
5. Prefader Meter
6. Input Compressor
7. Delay Processor
8. Equalization Processor
9. Linear Fader
10. Digital Input Router
11. Disk Limiter
12. Input Meter
13. Home Meter
14. Recorder Track
15. Digital Output Router
16. Output Fader
17. Output Limiter
18. Output Meter
19. Digital-to-Analog Converter
20. Output Connector

Obviously, a digital input or output is going to follow the same sequence, bypassing the analog input or output portion (highlighted), as appropriate.

Product Support

Download the latest **Firmware** from:	http://www.zaxcom.com/software-updates
Download the latest **User Manuals** from:	http://www.zaxcom.com/instruction-manuals
Submit Technical Questions at:	http://www.zaxcom.com/submit-a-technical-question
Submit information for **Repair Services** at:	http://www.zaxcom.com/repairs
Join the **Zaxcom Forum** at:	http://www.zaxcom.com/forum

Chapter 2 – Exterior Description

Front Panel Description

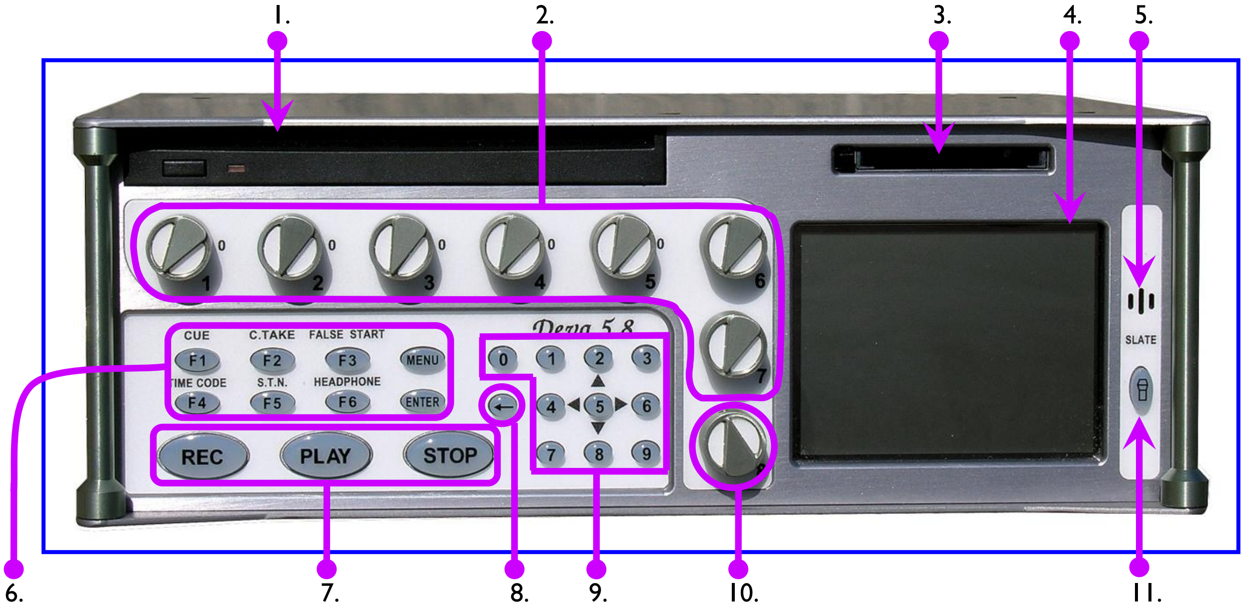


Figure 2-1 Front Panel Image

1. **Internal DVD Drive**
   The button will request that the media be eject.
2. **Faders 1 – 7**
   These are seven dedicated hardware faders. Each can be assigned to any channel or combination of channels in your Deva.

NOTE: For those of you that have wanted to tighten loose faders, it takes a 1.27mm Allen wrench.

3. **Internal CompactFlash Media Slot**
   Pressing the button (on the left side) once puts it in the extended position. Pressing it again will eject the currently installed CompactFlash card.
4. **Color Touchscreen**
   The touchscreen is the Deva's main interface. Most selections are made and displayed using it. You can use either a PDA stylus or your finger to make selections.

NOTE: If you should find the touchscreen freezing (and not because of the temperature), it could be caused by dust or dirt sneaking in along the edge of the touchscreen. Try sliding a business card around the edge and gently sweeping out under the bezel.

5. **Slate Microphone**
6. **Function keys**
   - ***CUE*** *key*
     Pressing this takes you to the ***Cue Mode page*** {**p.127**}.
   - ***C.TAKE*** *key*
     Pressing this marks the current Take as a Circled Take.
   - ***FALSE START*** *key*
     Pressing this takes you to the ***False Start dialog*** {**p.139**}.
   - ***MENU*** / ***ESC*** *key*
     When this key is pressed determines what its action will be:
     - While in the ***Home page*** {**p.35**}, it displays the ***Main Menu page*** {**p.40**}.
     - While in a parameter page, such as the ***Sample Rate page*** {**p.62**}, it will navigate to the previous page level. In this example, that is the ***Setup page*** {**p.60**}.

  - While in a data entry field, such as the ***Meter (#) Label*** *buttons* on the ***Meter Labels page*** {**p.69**} and you're making a change, it functions as the Escape key by discarding the unsaved change you have started and closing, in this example, the ***Keyboard page*** {**p.135**} that was opened to make the change.
- ***TIME CODE*** *key*
  This takes you to the ***Timecode page*** {**p.57**}.
- ***S.T.N.*** (Scene Take Note) *key*
  Pressing this takes you to the ***Scene Take Note page*** {**p.131**}.
- ***HEADPHONE*** *key*
  If Fader 8 is assigned to a channel, the first press displays the ***Headphone Volume page*** {**p.138**}.
  The next press displays the ***Headphone Mix page*** {**p.75**}.
  The next press, the previously displayed page is re-displayed.
- ***ENTER*** *key*
  This confirms data entry.

7. **Transport Control keys**
   - ***REC*** *key* – Sets the operating mode to RECORD
   - ***PLAY*** *key* – Sets the operating mode to PLAY
   - ***STOP*** *key* – Sets the operating mode to STOP

NOTE: If the ***Headphone Alarm Tone button*** {**p.74**} is set to **ON**, pressing the REC key will sound a single beep in the headphones only. Pressing the STOP key will sound two beeps.

8. ***SHIFT*** / ***BACKSPACE*** *key*
   This key is used in conjunction with others to perform additional tasks. For example, if it is pressed and held while pressing one of the ***Input (#) meters & buttons*** {**p.39**}, it allows one or more recording channels to be armed / disarmed.

9. **Numeric keypad**
   These provide an alternative means of entering numeric data such as timecode, metadata and equalization values.

10. **Headphone volume / Fader 8**
    This is the eighth fader. When it is not assigned to a channel, it controls the headphone volume. When assigned to a channel, the headphone volume can be adjusted using the ***HPH*** *key* and the ***Headphone Volume page*** {**p.138**}.

11. **Slate Mic Activation**

Left Side Description

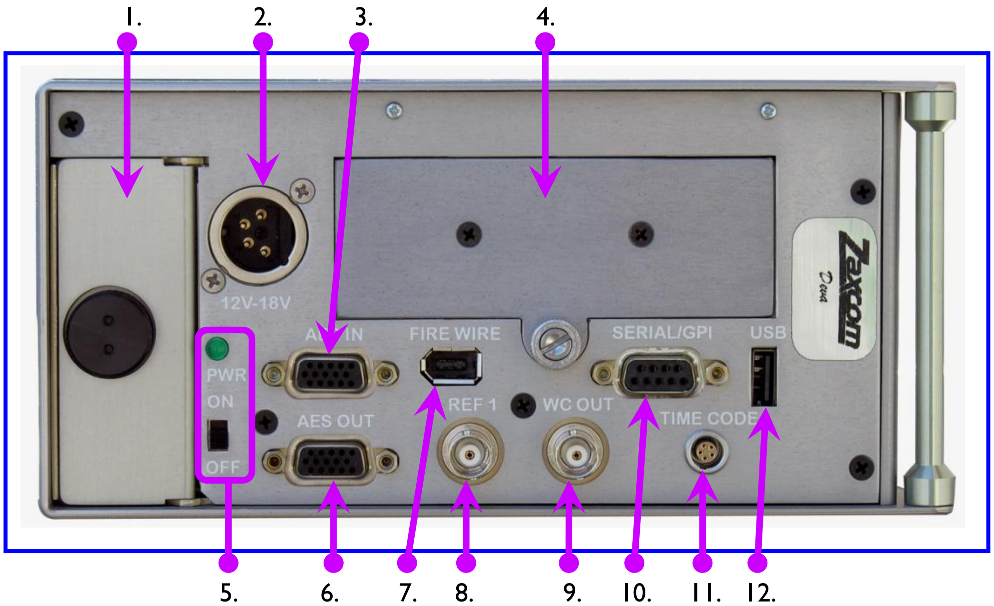


Figure 2-2 Left Side Image

1. **Battery Compartment**
   The **Black** knob rotates clockwise to lock the battery compartment door. It will only accept an NP-1 type battery. You can use Li-Ion or NiMH batteries, as long as you observe the warnings below.

> **NOTE:** It is possible to insert the battery incorrectly. The only indication it is in wrong is the unit will not power up. To install the battery correctly, turn it so the contact end is facing toward the opening and the surface with the contacts is turned toward the **External Power connector**.

> **NOTE:** Consider, once you have inserted the battery and closed the door, pushing the battery ejector pin on the opposite side just a bit. This will press the battery against the inside of the battery door helping to keep the door from unlatching and opening-up.

2. **External Power connector (XLR-4M)**
   (See *Power Connector (XLR-4)* {**p.173**}.)

> **WARNINGS:**
> 1) **Do NOT install** an internal battery with a voltage higher than 16.8 VDC.
> 2) **Do NOT connect** the external power connector to a source higher than 18.0 VDC.
>
> Those are the **ABSOLUTE** upper limits. If you exceed either of these limits by even 0.1 VDC, you will **BLOW** the unit's power supply and require it to be sent in for maintenance. The warranty will be **VOID** if it is determined that the power supply was blown by violating either of these warnings.

3. **AES (digital) input connector (DE-15 or mini DB-15)**
   Connect the supplied AES input cable to this connector. The cable provides four pairs of AES input. (See *AES Digital Input / Output Connectors (DB-15)* {**p.177**}.)
4. **Hard Disk Drive in Carrier**
   The carrier holds the Primary Drive where all audio is initially recorded.
5. **Power Switch and Power LED**
   When the power switch is 'ON' and power is available, the green LED illuminates.
6. **AES (digital) output connector (DE-15 or mini DB-15)**
   Connect the supplied AES output cable to this connector. The cable provides four pairs of AES output. (See *AES Digital Input / Output Connectors (DB-15)* {**p.177**}.)

7. **IEEE 1394 (FireWire) connector**
   Connect any FireWire 400 device (external HDD or CD/DVD-RAM drive) here. If required, power for the device can be turned 'ON' from the ***My Deva page*** {**p.112**}.

8. **Reference 1 connector (BNC)**
   Reserved for the future.

9. **Wordclock Output connector (BNC)**
   Connect an external device requiring Wordclock output here.

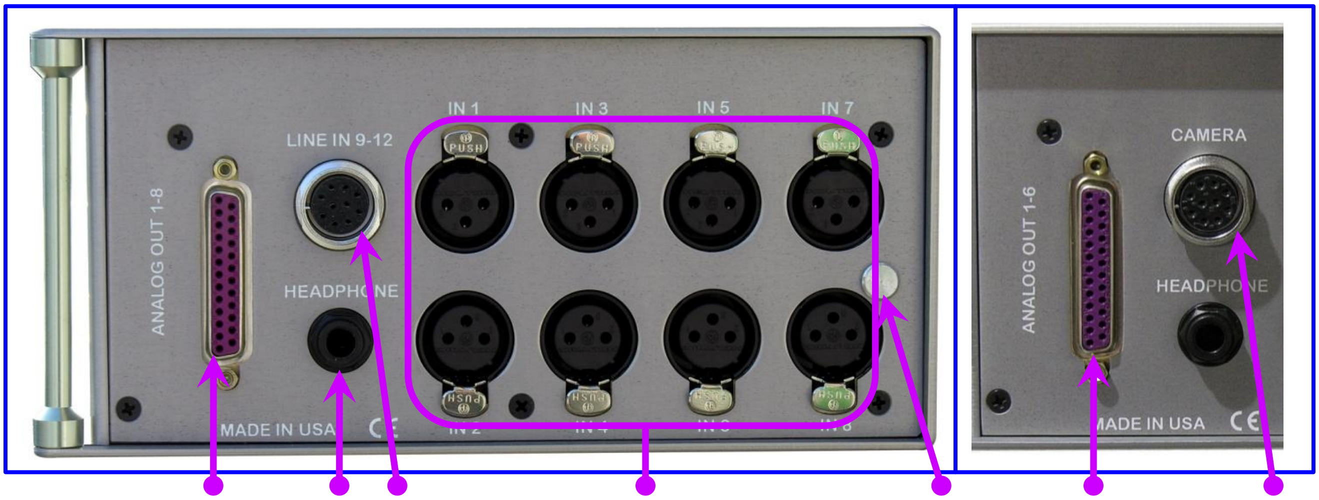
10. **Serial / GPI connector**
    Connect an external control device, such as the Mix-12 control surface here.

11. **Timecode connector (LEMO-5)**
    (See ***Timecode Connector (LEMO-5)*** {**p.176**}.)

12. **USB port**
    Connect a Zaxcom approved USB keyboard here.

NOTE: What appears to be a USB port is REALLY a PS2 keyboard connector in USB camouflage.

Right Side Description



Deva-16 Right Side | Deva-5.8 Right Side Differences

Figure 2-3 Deva-16 & Deva-5.8 Right Side Images

1. **Analog Outputs (Deva-16 = 8 channels, Deva-5.8 = 6 channels) (DB-25)**
   This connector outputs 8 (or 6) channels of line-level audio. You can select the channels assigned to these outputs from the ***My Deva page*** {**p.112**}. (See ***Analog Output Connector (DB-25)*** {**p.175**})

2. **Headphone Output (1/4" stereo jack)**
   Optimal 100 ohm impedance. (See ***Headphone Output Connector (1/4" stereo plug)*** {**p.173**}.)

3. **Line Inputs 9-12 Connector (Deva-16) / Camera Connector (Deva-5.8) (Hirose-10)**
   (See ***Line In / Camera Connector (Hirose-10)*** {**p.175**}.)

NOTE: For the Deva-5.8, the two return monitor feeds are summed to mono.

4. **Mic / Line Inputs 1 through 8 (XLR-3M)**
   Each balanced input is internally padded to handle either mic-level or line-level signals. The signal level is selected using the ***Analog Input (#) page*** {**p.89**}. (See ***Analog Input / Output Connectors (XLR-3)*** {**p.174**}.)

NOTE: Lower headphone impedance results in a higher headphone output level.

5. **Battery Ejection Pin**
   This pin ejects the NP-1 battery from its compartment.

Chapter 3 – Software Guide

The Deva is a very sophisticated recording device. The heart of the system is the software used to operate the device. This chapter describes every Deva page and the parameters within each.

Boot-up Sequence page

Page purpose: This page shows the processing necessary to initialize the Deva.

How to get here: Turn 'ON' the Deva.

```
=== Ver: vX.XX <MMM DD YYYY HH:MM:SS> ===
SMALL ROM ID=014F IsAtmel=0
CDReadSects:55AA BlockSize=512(15872MB)
INT=0.00V EXT=12.28V FW=12.10V VCC=4.95V
Flash system init…(AudPLD=B)(MainPLD=D)
KEYPRESS = 672
Loading saved settings…
====DSP SPEED = 294.912 ====
Initializing battery backed clock…
Synchronizing clocks…
Initializing audio…
 HD S#=SB144GGRKRRE7V
 HD Model=Hitachi HTS541616J9AT00
 Capacity=137.4 GB
DVD drive test: passed
waiting for Menu key release…
```

Figure 3-1 Boot-up Sequence page

Page Notes

Referring to **Figure 3-1** (above):

- The first line indicates information about the firmware version currently installed: the version #, and the date and time the version was created.
- The third line only appears if an internal backup CF card is installed. On the right side, the size of the currently installed card is displayed (in parentheses). It does NOT indicate the remaining free space on the card.
- In the fifth line:
  - **AudPLD=** refers to the hardware revision for the Audio Board. In this example, it is the **2nd** revision.
  - **MainPLD=** refers to the hardware revision for the Main Processor Board. In this example, it is the **4th** revision.
- The fourth line from the bottom displays the Primary Drive's capacity.
- The second line from the bottom displays the Primary Drive folder currently selected to hold your audio files. Consider verifying it is correct, as needed.

> **NOTE:** The battery voltage is checked during boot up. If it is less than 9 V, the Deva will ask if you want to continue. This prevents the Deva from corrupting the current recording folder, should it reboot continuously with a dying battery.

Page Level Shortcuts

- ***MENU*** *key* – Press and hold it to pause the startup sequence until you release it, allowing you to read all of the information.

Boot Keys

Holding down one of the following keys during bootup changes the Deva's behavior:

- ***F6*** *key* – causes the Deva (v6.06C or later) to reconstruct corrupted folders. This should allow folders to be mirrored in the normal way.
- ***0*** *key* – forces 48 kHz mode (in v3.56 and later) (also forces Deva to read corrupted folders).
- ***9*** *key* – enables 192 kHz recording speed. This is somewhat obsolete. The current approach is to run the DSP in fast mode and enable the 192 kHz selection.
- ***STOP*** *key* – forces a restore to factory defaults.

Menu Navigation

The Deva uses a high-resolution PDA-style touchscreen to access all software functions. In most cases, you can use your finger to make selections; however, you may use any PDA stylus.

There are two ways to navigate from page to page. One is to press the ***MENU*** *key* on the front panel. The other is to touch the ***Mode Status*** *button* at the top right corner of each page. The ***Mode Status*** *button* indicates the Deva's current operating mode (**Stop**, **Play** or **Record**).

NOTE: Touching the ***Mode Status*** *button* or pressing the ***MENU*** *key* does not change the Deva's current mode. It is safe to make either selection while recording.

Index of Nomad Pages

About Deva page	{p.134}	Input Meter Menu page	{p.70}
Advanced Mirror Options page	{p.126}	Internal Disk Utilities page	{p.113}
(Analog / Digital) Input Delay page	{p.109}	Keyboard page	{p.135}
(Analog / Digital) Input Trim page	{p.111}	(Knob / Touch) Fader Assign page	{p.55}
Analog Input (#) – BUS page	{p.97}	(Load / Save) User Presets page	{p.79}
Analog Input (#) – Dynamics page	{p.91}	Main Menu page	{p.40}
Analog Input (#) – EQ page	{p.94}	Memory page	{p.82}
Analog Input (#) page	{p.89}	Meter (#) Assignment page	{p.73}
Battery Menu page	{p.137}	Meter Assignments page	{p.72}
Cue Mode page	{p.127}	Meter Labels page	{p.69}
Debug Screen dialog box	{p.141}	Meter Menu page	{p.67}
Deva Service Menu Warning page	{p.140}	Mirror Drive page	{p.120}
Digital Input (#) – BUS page	{p.107}	Mirror File Type page	{p.122}
Digital Input (#) – Dynamics page	{p.102}	Mirror Folders page	{p.125}
Digital Input (#) – EQ page	{p.104}	Mix12 Setup page	{p.83}
Digital Input (#) page	{p.100}	My Deva page	{p.112}
Disk Folders page	{p.114}	Operating Mode page	{p.64}
Disk Limiter Settings page	{p.45}	Output Meter Menu page	{p.71}
Disk Mix page	{p.42}	Output Mix page	{p.47}
Factory Presets page	{p.78}	Output Limiter Settings page	{p.51}
Faders page	{p.54}	Output Routing Presets page	{p.53}
False Start dialog	{p.139}	Record Track Select page	{p.63}
Folder "???" Contents page	{p.116}	Remote Command Monitor page	{p.66}
Format Menu Warning page	{p.118}	Sample Rate page	{p.62}
Format Mirror Drive Caution page	{p.123}	Scene Take Note page	{p.131}
Formatting dialog box	{p.119}	Setup page	{p.60}
Headphone Mix page	{p.75}	Time/Date page	{p.80}
Headphone Options page	{p.74}	Timecode page	{p.57}
Headphone Volume page	{p.138}	Timecode Run Mode page	{p.59}
Home page	{p.35}	Tracks to Mirror page	{p.124}
Input Configure page (Analog Inputs selected)	{p.87}	User Interface Settings page	{p.85}
Input Configure page (Digital Inputs selected)	{p.98}	ZaxNet Setup page	{p.84}
Input Configure page (Line Lvl Inputs selected) (Deva-16 only)	{p.108}		

Table 3-1 Index of Nomad Pages

Index of Deva Screen Objects

OBJECT NAME	PAGE IT APPEARS ON
44100 button	Sample Rate page
47952 button	Sample Rate page
48000 button	Sample Rate page
48048 button	Sample Rate page
88200 button	Sample Rate page
96000 button	Sample Rate page
96096 button	Sample Rate page
192000 button	Sample Rate page
<< REW button	Cue Mode page
>> FFWD button	Cue Mode page
About Deva button	Main Menu page
Adjust Delay button	Input Configure page (Analog Inputs selected)
Adjust Delay button	Input Configure page (Digital Inputs selected)
Adjust Trim button	Input Configure page (Analog Inputs selected)
Adjust Trim button	Input Configure page (Digital Inputs selected)
Advanced Options button	Mirror Drive page
All Tracks button	Record Track Select page
Alphanumeric buttons	Keyboard page
Analog Channel buttons	Input Configure page (Analog Inputs selected)
Analog Input (Pre-fader) button	Meter (#) Assignment page
Analog Inputs Toggle button	Input Configure page (Analog Inputs selected)
Analog/Digital In Toggle button	Disk Mix page
Analog/Digital In Toggle button	(Knob / Touch) Fader Assign page
Analog/Digital In Toggle button	Output Mix page
Analog/Digital Output button	Meter (#) Assignment page
Attack button	Analog Input (#) – Dynamics page
Attack button	Digital Input (#) – Dynamics page
Attack button	Disk Limiter Settings page
Attack button	Output Limiter Settings page
Audio Gain meter	Disk Limiter Settings page
Audio Gain meter	Output Limiter Settings page
Audio Input graphic faders	Faders page
Audio Level Input meters	Input Meter Menu page
Audio Level meter	Analog Input (#) page
Audio Level meter	Disk Limiter Settings page
Audio Level meter	Output Limiter Settings page
Audio Level meters & buttons	Cue Mode page
Audio Level meters & buttons	Faders page
Audio Level meters & buttons	Home page
Audio Level Output meters	Output Meter Menu page
Auto Jam Date at Midnight	Timecode Run Mode page
Backlight Brightness button	User Interface Settings page
Band buttons	Analog Input (#) – EQ page
Band buttons	Digital Input (#) – EQ page
Band Type flag	Analog Input (#) – EQ page
Band Type flag	Digital Input (#) – EQ page
Band/Notch # field	Analog Input (#) – EQ page
Band/Notch # field	Digital Input (#) – EQ page
Battery icon button	Cue Mode page
Battery icon button	Home page
Battery Type field	Battery Menu page
B-Format button	Operating Mode page
Big STN button	User Interface Settings page
Burn Program ROM button	Deva Service Menu Warning page
BUS button	Analog Input (#) page
BUS button	Digital Input (#) page
Bypassed/Inline flag	Analog Input (#) – EQ page
Bypassed/Inline flag	Digital Input (#) – EQ page
Camera Returns Matrix buttons	Headphone Mix page
Cancel button	False Start dialog
Channel buttons	(Analog / Digital) Input Delay page
Channel to Meter buttons	Meter (#) Assignment page
Clear All button	Disk Mix page
Clear All button	(Knob / Touch) Fader Assign page
Clear All button	Input Configure page (Analog Inputs selected)
Clear All button	Input Configure page (Digital Inputs selected)
Clear All button	Input Configure page (Line Lvl Inputs selected)
Clear All button	Output Mix page
Clear Delay button	(Analog / Digital) Input Delay page
Clear Note button	Scene Take Note page
Clear Trim button	(Analog / Digital) Input Trim page
Clock button	Setup page
Color Schemes button	Meter Menu page
Color Theme button	User Interface Settings page
Command Monitor button	Operating Mode page
Compress button	Analog Input (#) – Dynamics page
Compress button	Digital Input (#) – Dynamics page
Continuous Jam All button	Timecode Run Mode page
Continuous Jam Timecode button	Timecode Run Mode page
Continuous Jam User Bits button	Timecode Run Mode page
Copy Compress button	Analog Input (#) – Dynamics page
Copy Compress button	Digital Input (#) – Dynamics page
Cue Mode button	Main Menu page
Cue Toggle button	Cue Mode page
Cur Segs Folder button	Cue Mode page
Cur Segs Folder button	Home page
Current Folder button	Internal Disk Utilities page
Date field	Time/Date page
Date Mode button	Time/Date page
Daylight Savings Time button	Time/Date page
Dec button	Analog Input (#) – Dynamics page
Dec button	Digital Input (#) – Dynamics page
Dec button	Disk Limiter Settings page
Dec button	Output Limiter Settings page
Decay button	Analog Input (#) – Dynamics page
Decay button	Digital Input (#) – Dynamics page
Decay button	Disk Limiter Settings page
Decay button	Output Limiter Settings page
Default STN Edit Position button	User Interface Settings page
Delay button	Analog Input (#) page
Delay button	Digital Input (#) page
Delay Mode button	(Analog / Digital) Input Delay page
Delete It button	False Start dialog
Delete Last Segment button	Internal Disk Utilities page
Digital Channel buttons	Input Configure page (Digital Inputs selected)
Digital Input (Pre-fader) button	Meter (#) Assignment page
Digital Inputs Toggle button	Input Configure page (Digital Inputs selected)
Digital Output button	Analog Input (#) page
Disk Channel buttons	Analog Input (#) – BUS page
Disk Channel buttons	Digital Input (#) – BUS page
Disk icon	Cue Mode page
Disk icon	Home page
Disk Mix button	Main Menu page
Disk Mix Matrix buttons	Disk Mix page
Disk Tracks Matrix buttons	Headphone Mix page
Disk Tracks Toggle button	Headphone Mix page
Display Inputs button	Meter Menu page
Display Outputs button	Meter Menu page
Do Not Format Drive button	Format Menu Warning page
Do Not Format Drive button	Format Mirror Drive Caution page
Down Arrow button	Disk Folders page
Down Arrow button	Folder "???" Contents page
Down Arrow button	Mirror Folders page
Down Arrow button	Scene Take Note page
Duration field	False Start dialog
Dynamics button	Analog Input (#) page
Dynamics button	Digital Input (#) page
Edit STN button	Folder "???" Contents page
End Seg button	Mirror Drive page
Enter Delay button	(Analog / Digital) Input Delay page
Enter Seg # button	Folder "???" Contents page
Enter Seg button	Cue Mode page
Enter Timecode button	Timecode page
Enter User Bits button	Timecode page
Entry Mode button	Analog Input (#) – EQ page
Entry Mode button	Digital Input (#) – EQ page
EQ button	Analog Input (#) page
EQ button	Digital Input (#) page
Equalization graph	Analog Input (#) – EQ page
Equalization graph	Digital Input (#) – EQ page
Erase Current Folder button	Internal Disk Utilities page
Erase Folder button	Disk Folders page
Factory Preset buttons	Factory Presets page
Factory Presets button	Headphone Mix page
Fader Assign button	Faders page
Fader Assign Toggle button	(Knob / Touch) Fader Assign page

OBJECT NAME	PAGE IT APPEARS ON
Fader Channel Assignment button	Mix12 Setup page
Fader/ZaxNet Trim button	(Knob / Touch) Fader Assign page
Faders button	Main Menu page
False Start button	User Interface Settings page
File Resolution button	Mirror Drive page
File Type button	Mirror Drive page
Firewire Power button	My Deva page
Folder buttons	Disk Folders page
Folder buttons	Mirror Folders page
Folder field	False Start dialog
Folder to Mirror button	Mirror Drive page
Format Drive button	Format Menu Warning page
Format Drive button	Internal Disk Utilities page
Format Drive button	Mirror Drive page
Format Drive FAT32 button	Format Mirror Drive Caution page
Four Track button	Record Track Select page
Frame Rate button	Timecode page
Free Run button	Timecode Run Mode page
Frequency field	Analog Input (#) – EQ page
Frequency field	Digital Input (#) – EQ page
Gain button	Analog Input (#) – Dynamics page
Gain button	Digital Input (#) – Dynamics page
Gain button	Disk Limiter Settings page
Gain button	Output Limiter Settings page
Generator T.C. field	Timecode page
Generator U.B. field	Timecode page
GPi1 Remote Roll button	Operating Mode page
Head Phone Mix button	Main Menu page
Headphone Alarm Tone button	Headphone Options page
Headphone button	Home page
Headphone Linear graphic fader	Headphone Options page
Headphone Mix button	Headphone Options page
Headphone Options button	Setup page
High Pass Filter button	Input Configure page (Analog Inputs selected)
High Pass Filter button	Input Configure page (Digital Inputs selected)
High Pass Hz button	Input Configure page (Analog Inputs selected)
High Pass Hz button	Input Configure page (Digital Inputs selected)
Hold Key Time button	User Interface Settings page
HPF Hz button	Analog Input (#) page
HPF Hz button	Digital Input (#) page
Inc button	Analog Input (#) – Dynamics page
Inc button	Digital Input (#) – Dynamics page
Inc button	Disk Limiter Settings page
Inc button	Output Limiter Settings page
Inc Scene button	Scene Take Note page
Increment User Bits button	Timecode page
Input Configure button	Main Menu page
Input Gain meter	Analog Input (#) – Dynamics page
Input Gain meter	Digital Input (#) – Dynamics page
Input Level meter	Analog Input (#) – Dynamics page
Input Level meter	Digital Input (#) – Dynamics page
Input Level meter	Digital Input (#) page
Input Level meters	(Analog / Digital) Input Trim page
Input Trim fields	(Analog / Digital) Input Trim page
Input Trimmer graphic fader	Analog Input (#) page
Input Trimmer graphic fader	Digital Input (#) page
Internal HD drive button	My Deva page
Internal HD drive Status button	My Deva page
Jam Date button	Timecode page
Jam T.C. button	Timecode page
Jam Time button	Timecode page
Jam U.B. button	Timecode page
Knob Assign Matrix buttons	(Knob / Touch) Fader Assign page
Left Arrow button	Scene Take Note page
Less Delay button	(Analog / Digital) Input Delay page
Less Gain button	(Analog / Digital) Input Trim page
Level field	Analog Input (#) – EQ page
Level field	Digital Input (#) – EQ page
Limiter button	Analog Input (#) page
Limiter Matrix buttons	Disk Mix page
Limiter Matrix buttons	Output Mix page
Limiter Settings button	Disk Mix page
Limiter Settings button	Output Mix page
Limiting button	Disk Mix page
Line Level Channel buttons	Input Configure page (Line Lvl Inputs selected)

OBJECT NAME	PAGE IT APPEARS ON
Line Lvl Inputs Toggle button	Input Configure page (Line Lvl Inputs selected)
Load From CD-R button	Deva Service Menu Warning page
Load ProgFile button	Deva Service Menu Warning page
Load/Save Toggle button	(Load / Save) User Presets page
Location button	User Interface Settings page
Lock Faders button	Faders page
Low Battery Voltage button	Battery Menu page
Mark It button	False Start dialog
Memory button	Setup page
Meter Assignment buttons	Meter Assignments page
Meter Assigns button	Meter Menu page
Meter Brightness button	Mix12 Setup page
Meter Label buttons	Meter Labels page
Meter Labels button	Meter Menu page
Meter Mode button	Meter Menu page
Meter Vertical/Horizontal button	Meter Menu page
Meters button	Setup page
Mic/Line Level button	Analog Input (#) page
Mic/Line Level button	Input Configure page (Analog Inputs selected)
Mirror Drive button	My Deva page
Mirror Drive Select button	My Deva page
Mirror Drive Status button	Mirror Drive page
Mirror Drive Status button	My Deva page
Mirror Mode button	Mirror Drive page
Mirror Playback button	Disk Folders page
Mirror Status button	Home page
Mirroring Mode button	Mirror Folders page
Mix12 button	Setup page
Mix12 Input Trim button	Analog Input (#) page
Mix12 Input Trim button	Digital Input (#) page
Mix-12 Support button	Mix12 Setup page
Mode Status button	Cue Mode page
Mode Status button	Home page
-MORE- button	Disk Mix page
-MORE- button	Output Mix page
More Delay button	(Analog / Digital) Input Delay page
More Gain button	(Analog / Digital) Input Trim page
Mute Play button	Output Routing Presets page
Mute Unrecorded Tracks button	Headphone Options page
My Deva button	Main Menu page
Name Folder button	Disk Folders page
Next Seg button	Cue Mode page
Normal (Monitors Disk Bus) button	Meter (#) Assignment page
Normal button	Output Routing Presets page
Notch buttons	Analog Input (#) – EQ page
Notch buttons	Digital Input (#) – EQ page
Note button	Scene Take Note page
Number of Home Screen Meters button	Meter Menu page
Operating Modes button	Setup page
Output Channel buttons	Analog Input (#) – BUS page
Output Channel buttons	Digital Input (#) – BUS page
Output Limiting button	Output Mix page
Output Mix button	Main Menu page
Output Mix Matrix buttons	Output Mix page
Output Routing button	Output Mix page
Outputs Matrix buttons	Headphone Mix page
Page Down button	Disk Folders page
Page Down button	Folder "???" Contents page
Page Down button	Mirror Folders page
Page Up button	Disk Folders page
Page Up button	Folder "???" Contents page
Page Up button	Mirror Folders page
Phantom Power button	Analog Input (#) page
Phase Invert button	Disk Mix page
Phase Invert button	Headphone Mix page
Phase Invert button	Output Mix page
Play buttons	Output Mix page
Play Switches button	Output Routing Presets page
Play Tracks 1-6, 9-10 button	Output Routing Presets page
Play Tracks 1-6, 15-16 button	Output Routing Presets page
Play Tracks 3-10 button	Output Routing Presets page
Play Tracks 9-16 button	Output Routing Presets page
Power Roll button	ZaxNet Setup page
Pre-/Post-Fader button	Disk Mix page
Pre-/Post-Fader button	Output Mix page

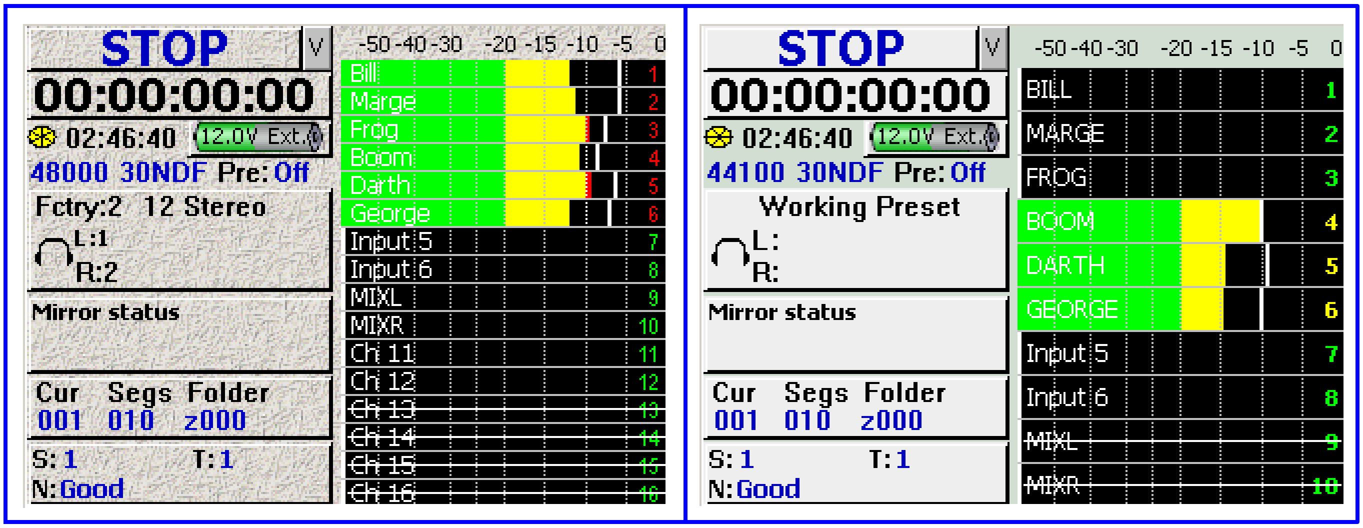
OBJECT NAME	PAGE IT APPEARS ON
Pre-record Duration field	Home page
Pre-Record Time button	Setup page
Preset button	Disk Mix page
Preset button	(Knob / Touch) Fader Assign page
Preset button	Output Mix page
Prev Seg button	Cue Mode page
Processor Speed button	Deva Service Menu Warning page
Q field	Analog Input (#) – EQ page
Q field	Digital Input (#) – EQ page
Ratio button	Analog Input (#) – Dynamics page
Ratio button	Digital Input (#) – Dynamics page
Ratio button	Disk Limiter Settings page
Ratio button	Output Limiter Settings page
Reader T.C. field	Timecode page
Reader U.B. field	Timecode page
Rec buttons	Output Mix page
Record Channels button	Setup page
Record Run button	Timecode Run Mode page
Remaining Recording Time field	Cue Mode page
Remaining Recording Time field	Home page
Reset Graph button	Battery Menu page
Reset Take button	Scene Take Note page
Restore Factory Defaults button	Memory page
Right Arrow button	Scene Take Note page
Route Line Lvl Input button	Input Configure page (Line Lvl Inputs selected)
Routing Presets button	Output Mix page
S: T: N: button	Cue Mode page
S: T: N: button	Home page
Sample Rate button	Setup page
Sample Rate Reference button	Sample Rate page
Sampling-rate field	Home page
Scene button	Scene Take Note page
Scene field	False Start dialog
Scene Take Note button	Main Menu page
Segment button	Scene Take Note page
Segment field	False Start dialog
Segment of Segments field	Folder "???" Contents page
Segment of Segments field	Scene Take Note page
Select All button	(Analog / Digital) Input Trim page
Serial Port Mode button	Operating Mode page
Serial Remote Roll button	Operating Mode page
Service button	Setup page
Set Date button	Time/Date page
Set Time button	Time/Date page
Set ZaxNet UB button	Cue Mode page
Setup button	Main Menu page
Slate Matrix buttons	Disk Mix page
Slate Matrix buttons	Output Mix page
Slate Source button	Operating Mode page
Software Options button	Deva Service Menu Warning page
Sort Order button	Disk Folders page
Sort Order button	Mirror Folders page
Start Seg button	Mirror Drive page
Start-Up Screen button	User Interface Settings page
Stop buttons	Output Mix page
Store Note button	Scene Take Note page
Stored Note buttons	Scene Take Note page
Take button	Scene Take Note page
Take buttons	Folder "???" Contents page
Take field	False Start dialog
Text output area	Remote Command Monitor page
Thresh button	Analog Input (#) – Dynamics page
Thresh button	Digital Input (#) – Dynamics page
Thresh button	Disk Limiter Settings page
Thresh button	Output Limiter Settings page
Time Code button	Main Menu page
Time field	Time/Date page
Time Mode button	Time/Date page
Timecode button	Cue Mode page
Timecode button	Home page
Timecode Displayed button	Timecode page
Timecode Frame-rate field	Home page
Timecode Offset button	Advanced Mirror Options page
Timecode Out button	Timecode page
Timecode Run Mode button	Timecode page
Timecode Stamp Pull Down button	Mirror File Type page
Timecode Stamp Pull Up button	Mirror File Type page
Toggle On Recorded Tracks button	Headphone Mix page
Tone button	Main Menu page
Tone Button Assign button	Mix12 Setup page
Tone Level button	Setup page
Tone Matrix buttons	Disk Mix page
Tone Matrix buttons	Output Mix page
Touch Fader Assign Matrix buttons	(Knob / Touch) Fader Assign page
Tracks Mixed To button	Record Track Select page
Tracks to Mirror button	Mirror Drive page
Tracks to Mirror buttons	Tracks to Mirror page
Tracks to Record buttons	Record Track Select page
Transport Operation button	Operating Mode page
Transport Slaved button	ZaxNet Setup page
Two Track button	Record Track Select page
Up Arrow button	Disk Folders page
Up Arrow button	Folder "???" Contents page
Up Arrow button	Mirror Folders page
Up Arrow button	Scene Take Note page
Up/Down Arrow button	Disk Mix page
User Interface button	Setup page
User Preset buttons	(Load / Save) User Presets page
User Presets button	Headphone Mix page
View button	Cue Mode page
View button	Home page
Voltage field	Battery Menu page
Voltage vs Time graph	Battery Menu page
Wav Mono button	Mirror File Type page
Wav Mono F button	Mirror File Type page
Wav Poly button	Mirror File Type page
Wav Poly F button	Mirror File Type page
Wireless Audition button	Cue Mode page
Wireless ReRec button	Cue Mode page
Write Sound Report button	Advanced Mirror Options page
ZAX File button	Mirror File Type page
ZaxNet button	Setup page
ZaxNet button	ZaxNet Setup page

Home page

Page purpose: This page displays the current status for the recorder and its major components.

How to get here:

- Turn the power on and let the system initialize. If another page is designated as the start page, press the ***MENU*** *key* a few times until this page appears.



Deva-16 view Deva-5.8 view

Figure 3-2 Home page

Page Notes

None

Page Level Shortcuts

Using the Deva front panel:

- ***ENTER*** *key* – (hold for 2 second) Lock the touchscreen.
  - ***MENU*** *key* – press to unlock the touchscreen.
- ***F1*** *key* – displays the ***Cue Mode page*** {**p.127**}.
- ***F2*** *key* – flags the currently displayed Take as a "CIRCLE TAKE".
- ***F3*** *key* – (first press) displays the ***False Start dialog*** {**p.139**}.
  (second press) closes the ***False Start dialog*** without doing anything to the dialog.
- ***F4*** *key* – (first press) displays the ***Timecode page*** {**p.57**}.
  (second press) displays the ***Timecode Diagnostics page***.
- ***F5*** *key* – displays the ***Scene Take Note page*** {**p.131**}.
- ***F6*** *key* – (first press, if Fader-8 assigned) displays the ***Headphone Volume page*** {**p.138**}.
  (next press) displays the ***Headphone Mix page*** {**p.75**}.
  (next press) return to previously displayed page.
- Pressing a ***Recording*** channel for about 2 seconds – solos that channel to the headphones, the ***Headphone*** *button* displays **SOLO**, the left and right headphone channels display the solo'd track and the other track audio bars are grayed out.
  - Pressing any other track SOLOs that track. The left and right headphone channels display the solo'd track's #.
  - Pressing the ***Headphone*** *button*, cancels the SOLO.
- ***SHIFT*** *key*+***Recording*** channel – arms / disarms the track that was touched. A disarmed track has a line through it long wise and the bar indicating the audio level changes to **Blue**.
- ***0 – 9*** *keys* – opens the ***Enter Segment data entry field***, {**p.37**}. Type the remainder of the number and press the ***ENTER*** *key*. Once entered, the system attempts to move to the day's recording, by the segment # entered. If the number entered is too high, the last available segment is displayed.
  - ***SHIFT / BACKSPACE*** *key* – deletes one character at the cursor and moves the cursor to the left one character.
  - ***MENU / ESC*** *key* – functions as the ***ESC*** *key* by discarding unsaved changes and closing the data entry field.
  - ***ENTER*** *key* – accepts the data, validates it and closes the data entry field.

Using the Mix-12 embedded keyboard:

- ***ESC** key* – same as pressing the ***MENU** key*.
- ***F1** key* – displays the ***Cue Mode page*** {**p.127**}.
- ***F2** key* – flags the currently displayed Take as a "CIRCLE TAKE".
- ***F3** key* – (first press) displays the ***False Start dialog*** {**p.139**}.
  (second press) closes the ***False Start dialog*** without doing anything to the dialog.
- ***F4** key* – (first press) displays the ***Timecode page*** {**p.57**}.
  (second press) displays the ***Timecode Diagnostics page***.
- ***F5** key* – go to ***Scene Take Note page*** {**p.131**}.
- ***F6** key* – (first press, if Fader-8 assigned) displays the ***Headphone Volume page*** {**p.138**}.
  (next press) displays the ***Headphone Mix page*** {**p.75**}.
  (next press) return to previously displayed page.
- ***F7** key* – displays the ***Meter Labels page*** {**p.69**}.
- ***F8** key* – edit the ***Scene** button* in the ***Scene Take Note page*** {**p.131**}.
- ***F9** key* – edit the ***Take** button* in the ***Scene Take Note page*** {**p.131**}.
- ***F10** key* – edit the ***Note** button* in the ***Scene Take Note page*** {**p.131**}.
- ***0 – 9** keys* – opens the ***Enter Segment data entry field***, {**p.37**}. Type the remainder of the number and press the ***ENTER** key*. Once entered, the system attempts to move to the day's recording, by the segment # entered. If the number entered is too high, the last available segment is displayed.
- ***M** key* – toggle Mix-12 meters between prefader input level and the disk mix.
- ***Arrow** keys* – navigation in pages.
- ***CRTL** key* & single digit – opens the label for the associated channel for modification. Correct the existing label or enter a new one from scratch. While a meter is being edited it will not update.
  - See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exception(s):
    - ***BACKSPACE** key* –
      1) If the cursor is on the last character, it deletes the character to the left of the cursor and moves the cursor and character 1 position to the left.
      2) If the cursor is not on the first or last character, it deletes the character to the left of the cursor and shifts all characters from the cursor to the end of the text right 1 character.
      3) If the cursor is on the first character, it deletes the character at the cursor and shifts all characters from the next character to the end of the text right 1 character.

Using an attached keyboard:

- ***ESC** key* – same as pressing the ***MENU** key*.
- ***F1** key* – displays the ***Cue Mode page*** {**p.127**}.
- ***F2** key* – flags the currently displayed Take as a "CIRCLE TAKE".
- ***F3** key* – (first press) displays the ***False Start dialog*** {**p.139**}.
  (second press) closes the ***False Start dialog*** without doing anything to the dialog.
- ***F4** key* – (first press) displays the ***Timecode page*** {**p.57**}.
  (second press) displays the ***Timecode Diagnostics page***.
- ***F5** key* – displays the ***Scene Take Note page*** {**p.131**}.
- ***F6** key* – (first press, if Fader-8 assigned) displays the ***Headphone Volume page*** {**p.138**}.
  (next press) displays the ***Headphone Mix page*** {**p.75**}.
  (next press) return to previously displayed page.
- ***F7** key* – displays the ***Meter Labels page*** {**p.69**}.
- ***F8** key* – edit the ***Scene** button* in the ***Scene Take Note page*** {**p.131**}.
- ***F9** key* – edit the ***Take** button* in the ***Scene Take Note page*** {**p.131**}.
- ***F10** key* – edit the ***Note** button* in the ***Scene Take Note page*** {**p.131**}.
- ***INS** key* – displays the ***Home page*** {**p.35**} from anywhere.
- ***0 – 9** keys* – opens the ***Enter Segment data entry field***, {**p.37**}. Type the remainder of the number and press the ***ENTER** key*. Once entered, the system attempts to move to the day's recording, by the segment # entered. If the number entered is too high, the last available segment is displayed.
- ***M** key* – toggle Mix-12 meters between prefader input level and the disk mix.
- ***Arrow** keys* – navigation in pages.

Enter Segment data entry field

This field only appears on top of the ***Disk** icon* after a number has been entered. This field is tied to the audio recording segment displayed in the ***Segs** field* of the ***Cur Segs Folder** button*.

Enter Segment data entry field Shortcuts

See: *Common Data Entry Field Shortcuts List* {**p.159**}

Mode Status button

(*Figure 3-2* {**p.35**} displays **STOP**)

Located at the top of the page, it displays the current operating mode (**RECORD**, **PLAY** or **STOP)**.

Pressing this button from here, takes you to the ***Main Menu** page* {**p.40**}. From any other page, pressing the ***Mode Status** button* (or the ***MENU** key* on the front panel) takes you back one level.

NOTE: Pressing the ***Mode Status** button* does **not** change the Deva's operating mode. It only brings you back one page or level within a page.

View button

(*Figure 3-2* {**p.35**} displays **V**)

Pressing it cycles through four ***Home** page* display layouts (see *Figure 3-22* {**p.67**}).

Timecode button

(*Figure 3-2* {**p.35**} displays **00:00:00:00**)

Pressing it displays the ***Timecode** page* {**p.57**}.

Disk icon

(*Figure 3-2* {**p.35**} displays a rotating disk with a Yellow highlight.)

The color indicates the current state of the mirror process.

Disk Color	*Description*
White	Mirror process is looking for work.
Yellow	Mirror process is in standby.
Green	Mirror process is active.
Red	In record mode, mirror process suspended.

Table 3-2 Disk icon Color Code

Remaining Recording Time field

(*Figure 3-2* {**p.35**} displays **02:46:40**.)

It displays the remaining recording time based on the remaining drive space, number of tracks being recorded and the sampling-rate & bit-depth of the track(s).

Battery icon button

(*Figure 3-2* {**p.35**} displays **12.0V Ext.** inside of the ***Battery** icon button* and a color bar, indicating the state of charge.)

It displays the voltage and the source (**Int** or **Ext**) at that moment.

Pressing it displays the ***Battery Menu** page* {**p.137**}. Deva automatically switches if it is running on an internal battery, and an external power source, greater than 9.5 VDC, is applied. If the Deva is running on external power **and** a battery is inserted, it will automatically switch to the internal battery when the external power drops below 9.5 VDC. When the voltage drops below the level set in the ***Battery Menu** page* {**p.137**}, the text changes from **Black** to **Red**.

IMPORTANT: Because of the variety of battery chemistries, the Deva does not charge the internal battery.

Sampling-rate field

(*Figure 3-2* {**p.35**} displays **48000**)

It displays the sampling-rate used while recording.

Timecode Frame-rate field

(***Figure 3-2*** {**p.35**} displays **30NDF**)

It displays the timecode frame-rate used while recording.

Pre-record Duration field

(***Figure 3-2*** {**p.35**} displays **Pre: Off**)

It displays the currently selected pre-record duration. Deva has a memory buffer. If pre-record is enabled and audio is coming in, Deva will record up to 10 seconds of audio prior to when the ***REC*** *key* was pressed.

NOTE: The pre-record buffer will only work with a sampling-rate of **48048** or less. If a higher rate is selected, this field will display **Off** and cannot be changed.

Headphone button

(***Figure 3-2*** {**p.35**} displays on its first line **Fctry:2**)

- The first line indicates which headphone mix is currently in use by type and name. If it has not been saved, **Working Preset** is displayed.
- The second line indicates which track(s) are being sent to the left headphone channel.
- The third line indicates which track(s) are being sent to the right headphone channel.

Pressing it displays the ***Headphone Mix page*** {**p.75**}.

NOTE: Individual tracks can be monitored. See ***Solo Mode*** {**p.39**}.

Mirror Drive Status button

(***Figure 3-2*** {**p.35**} displays **Mirror status**)

While the mirror process is caught up:

- The first line indicates "Ready" and the available space on the selected mirror media.
- The second line indicates "Mirroring..." and that the process mirrored everything it has been told to mirror.
- The third line indicates whether or not the mirror process is enabled.

While the mirror process is active:

- The first line indicates the available space on the selected mirror media.
- The second line indicates the progress of the mirror process on the current file (if mirror is catching-up but is not on the current recording in progress).
- The third line indicates the file out of files progress of the mirror and the folder being mirrored (not necessarily the current recording folder).

Pressing it displays the ***My Deva page*** {**p.112**}.

Cur Segs Folder button

(***Figure 3-2*** {**p.35**} displays on the first line **Cur Segs Folder**)

Pressing it displays the ***Disk Folders page*** {**p.114**}.

Cur field

Displays the index number of the current Take (either being recorded or played back).

Segs field

Displays the total number of Takes in the current folder.

Folder field

Displays the name of the currently selected Primary Drive folder, which is where audio recording files are stored. Normally, a new folder is set up for each Sound Roll (each day's work). The Folder Name is the Sound Roll Number. You can rename the folder to anything with a maximum of 6 characters. The name in this field is the default folder when mirroring audio files to the DVD media, CF card or external FireWire device.

NOTE: The current firmware allows each folder to be any size, up to the total capacity of the drive.

S: T: N: button

(*Figure 3-2* {**p.35**} displays on the first line **S:1 T:1**)

Displays the user entered metadata (Scene, Take, Note) for the current Take (during playback or metadata review) or the NEXT Take to be recorded.

Pressing it displays the *Scene Take Note page* {**p.131**}.

Input (#) meters & buttons

(*Figure 3-2* {**p.35**} displays on the right half of the page)

Up to sixteen* tracks can be displayed. Unarmed tracks are displayed with a line through them. Individual tracks can be shown or hidden using the ***Number of Home Screen Meters*** *button* on the *Meter Menu page* {**p.67**}. The meters use PPM / Peak Hold ballistics. The Peak Hold Bar remains for 5 seconds. The color of the audio level bar changes from Green to Yellow when the level reaches -20 dBFS or above, and changes to Red when it reaches -10 dBFS or above. The channel number on the far right changes from Green to Yellow when the Peak Hold Bar reaches -20 dBFS or above, and changes to Red when it reaches -10 dBFS or above.

* Deva-5.8 – maximum 10 tracks, Deva-16 – maximum 16 tracks

Solo Mode

You can solo any input channel by touching the meter display for the desired track for 2 seconds. The display will enter 'solo' mode ("**SOLO**" and the number of the solo'd track is displayed in the ***Headphone*** *button*). Then, touching any other track instantly solos the new track.

To exit '**SOLO**' mode:

- touch the ***Headphone*** *button*, or
- touch any track for 2 seconds, or
- exit the page.

Arm / Disarm a Recording Track

Pressing the ***SHIFT*** *key* on Deva's front panel while pressing the appropriate meter on the ***Home*** *page*, arms / disarms the recording of that channel. Disarmed tracks are indicated by a line drawn through the track's meter.

Main Menu page

Page purpose: This page provides access to all of Deva's operating functions and parameter adjustments.

How to get here:

- (***MENU*** *key*)
- (***Mode Status*** *button*)

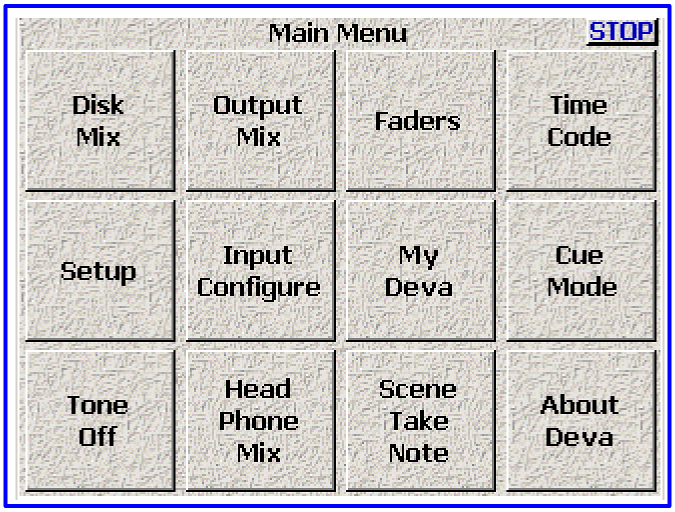


Figure 3-3 Main Menu page

Page Notes

None

Page Level Shortcuts

None

Mode Status button

(***Figure 3-3*** displays **STOP**)

This button appears on ALL remaining pages.

Located at the top right corner of EVERY page (except on the ***Home page*** {**p.35**}), it displays the current operating mode (**RECORD**, **PLAY** or **STOP)**.

Pressing this button (or the ***MENU*** *key* on the front panel) takes you back one level.

> **NOTE:** Pressing the ***Mode Status*** *button* does **not** change the Deva's operating mode. It only brings you back one page or level within a page.

Disk Mix button

Pressing it displays the ***Disk Mix page*** {**p.42**}.

Output Mix button

Pressing it displays the ***Output Mix page*** {**p.47**}.

Faders button

Pressing it displays the ***Faders page*** {**p.54**}.

Time Code button

Pressing it displays the ***Timecode page*** {**p.57**}.

Setup button

Pressing it displays the ***Setup page*** {**p.60**}.

Input Configure button

Pressing it displays the ***Input Configure page (Analog Inputs selected)*** {**p.87**}.

My Deva button

Pressing it displays the ***My Deva page*** {**p.112**}.

Cue Mode button

Pressing it displays the ***Cue Mode page*** {**p.127**}.

Tone button

Pressing it toggles the Reference Tone 'ON' or 'OFF'.

Head Phone Mix button

Pressing it displays the ***Headphone Mix page*** {**p.75**}.

Scene Take Note button

Pressing it displays the ***Scene Take Note page*** {**p.131**}.

About Deva button

Pressing it displays the ***About Deva page*** {**p.134**}.

Additional Functionality

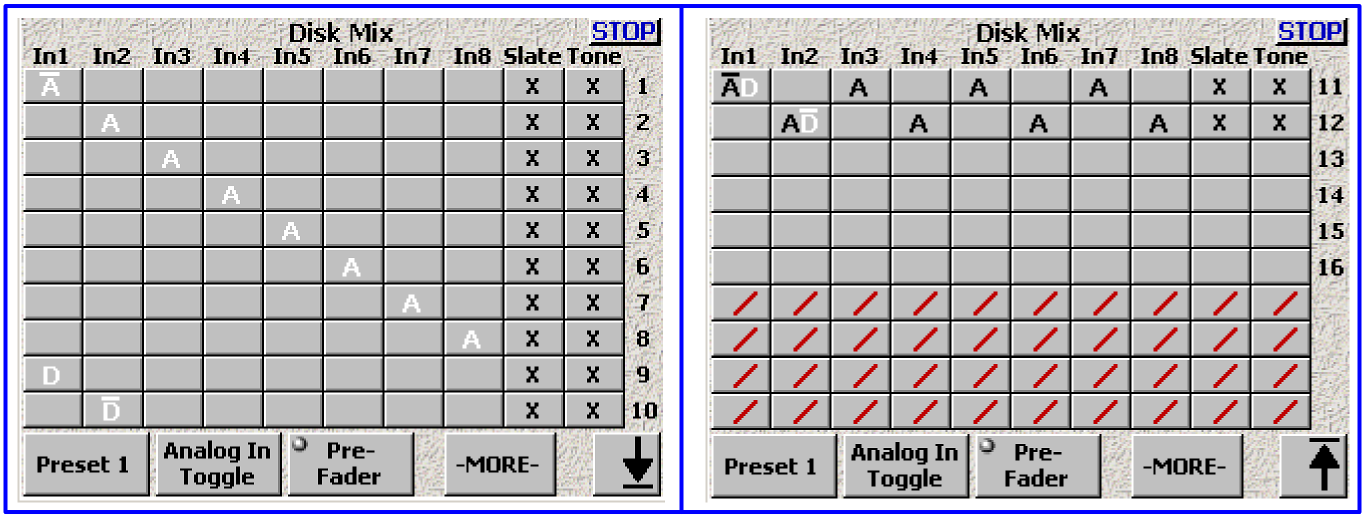
1. To activate the ***Service*** *button* in the bottom right of the ***Setup page*** {**p.60**}, enter **036** while in this page.
2. To activate the ***Debug Screen dialog box*** {**p.141**}, enter **1967** while in this page.

Disk Mix page

Page purpose: This page routes the 8 analog inputs, 8 digital inputs, slate mic and the reference tone to the 16 (or 10) recording tracks.

How to get here:

- (***MENU** key* → ***Disk Mix** button*)



Deva-16 Top view
Deva-5.8 view

Deva-16 Bottom view

Figure 3-4 Disk Mix page

Page Notes

- In this page, the top line shows the 8 available input channels (In1 – In8) plus the slate mic and the tone generator. The vertical line of numbers on the right shows the 12 available recording tracks. The bottom row of buttons controls the parameters of the matrix selections.
- ***Figure 3-4*** {above} shows a Deva-16 set up to record 8 analog pre-fader inputs to tracks 1 through 8, 2 digital pre-fader inputs recorded to tracks 9 and 10 and a post-fader mix to tracks 11 and 12. Analog input #1 and digital input #2 are inverted. The slate-mic and the tone generator are enabled for all tracks except 13 - 16.

Page Level Shortcuts

None

Disk Mix matrix buttons

Connects the Input Channel to the Recording Channel.

Pressing one of them cycles through the available choices, based on the setting of the ***(Analog / Digital) In Toggle*** *button*, ***Phase Invert*** *button* and ***(Pre- / Post-) Fader*** *button*.

Indicator	*Description*
Black **A**	Analog input post-fader
Black **A** with Line	Analog input post-fader with signal phase inverted
White **A**	Analog input pre-fader
White **A** with Line	Analog input pre-fader with signal phase inverted
Black **D**	Digital input post-fader
Black **D** with Line	Digital input post-fader with signal phase inverted
White **D**	Digital input pre-fader
White **D** with Line	Digital input pre-fader with signal phase inverted

Table 3-3 Indicator Descriptions

Slate buttons

Pressing one of them selects / deselects (indicated by an **X**) sending the slate source on the associated path.

Tone buttons

Pressing one of them selects / deselects (indicated by an **X**) sending tone on the associated path.

Preset button

Pressing it allows you to save and recall up to five saved settings. Think of each preset as a page on which to write the configuration.

To save a configuration, perform the following:

1) Move to the Preset # you want to build. Normally, the first to be built would be Preset 1.
2) If you have not previously saved anything into the preset, it will be a blank slate. Establish all of the required items for this preset.
3) If you need to establish any additional presets, repeat steps 1 & 2 for each additional configuration.

To load a configuration once it has been saved, simply press the ***Preset*** *button* until the number displayed is the one you're expecting. At that point, examine the configuration; it will be as you had saved it. If, at any time, you need to update the configuration, inset your changes, they are automatically saved.

NOTE: The Limit column settings are not saved in a specific preset #.

(Analog / Digital) In Toggle button

Press it to select either analog or digital inputs. Selecting the button once changes it, selecting it again changes it back.

(Pre- / Post-) Fader button

Pressing it allows you to choose whether each selection is pre- or post-fader. For example, you can record the microphone on one channel of the Deva post-fader and on another pre-fader, so it is unaffected by the mix.

- Pre-Fader: "**A**" or "**D**" – White letter.
- Post-Fader: "**A**" or "**D**" – **Black** letter.

-MORE- button

Pressing it cycles the buttons displayed on the bottom of the page.

Clear All button

Pressing it removes all selections from the matrix and empties the contents of the current preset.

NOTE: The Limit column settings are not cleared when this button is pressed.

Phase Invert button

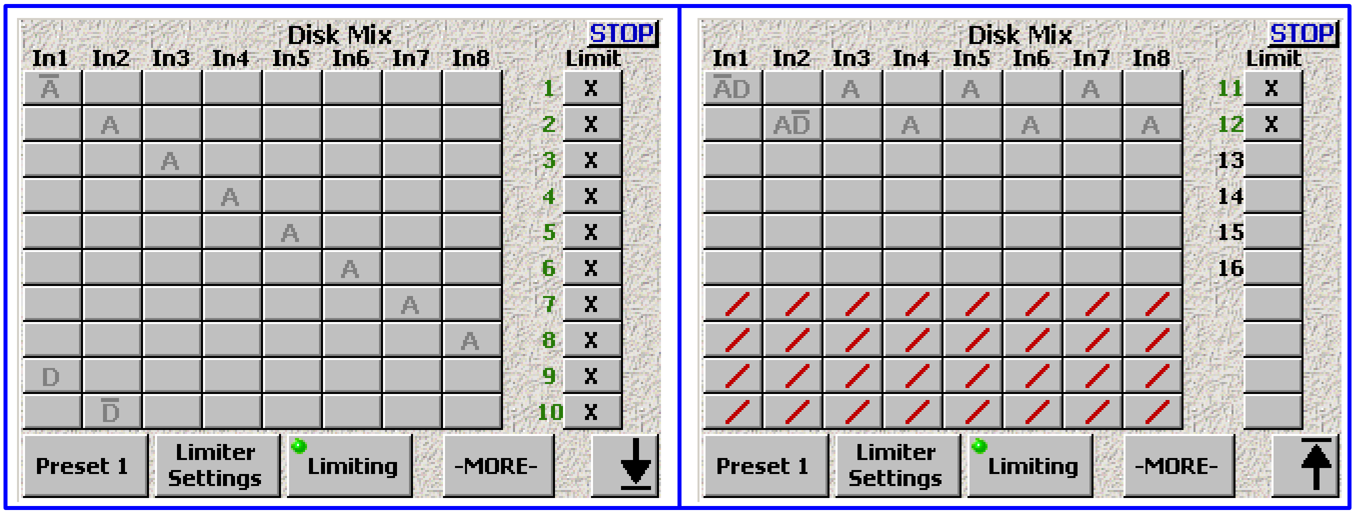
Pressing it reverses the phase of the selected input. A reversed phase input appears with a bar over the letter (**A** or **D**).

Limiter Settings button

Pressing it displays the ***Disk Limiter Settings page*** {**p.45**}.

Limiting button

Pressing it displays an additional column on the right used to flag which tracks have limiting enabled. With it displayed, pressing any of the boxes will turn ON limiting for that track, indicated by an **X**. Pressing it again turns OFF limiting for that track. The one set of parameters under the ***Limiter Settings*** *button* is used by all of these limiters.



Deva-16 Top view
Deva-5.8 view

Deva-16 Bottom view

Figure 3-5 Disk Mix – Limiter column page

(Up / Down) Arrow button (Deva-16 only)

Pressing it toggles the display of the tracks. 1 – 10 on the first page and 11 – 16 on the last page.

Limit buttons

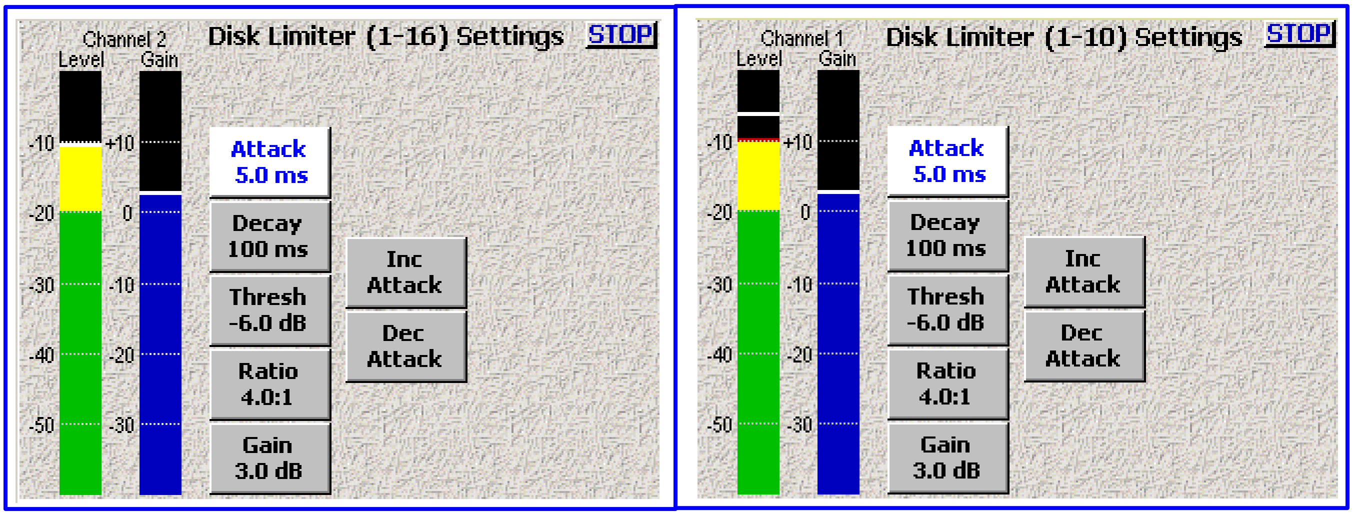
Pressing these buttons control which tracks will have their associated limiter enabled (indicated by an **X**).

Disk Limiter Settings page

Page purpose: The limiter prevents the input signal (analog or digital) from clipping or exceeding 0 dBFS. When the signal exceeds the threshold value, the limiter automatically reduces the input signal while it is above the threshold.

How to get here:

- (***MENU*** *key* → ***Disk Mix*** *button* → ***Limiter Settings*** *button*)



Deva-16 view Deva-5.8 view

Figure 3-6 Disk Limiter Settings page

Page Notes

- You have three methods to change each parameter on this page:
  - Click on a parameter, it turns White. The ***Inc*** *button* or ***Dec*** *button* pick up a parameter title. Pressing either button will adjust the parameter in its respective direction.
  - Click on a parameter, it turns White. Click on the now White button and a data entry field appears. Directly enter the value and press the ***ENTER*** *key*.
  - On an attached keyboard, press the ***UP*** or ***DOWN ARROW*** *key* to select the parameter button and press the ***ENTER*** *key* to open it for modification. Directly enter the value and press the ***ENTER*** *key*.
- If you enter a value that is out of the valid range, the closest value within range is applied.

Page Level Shortcuts

- ***UP / DOWN ARROW*** *keys* – navigate through the left hand column of buttons
- ***0 - 9*** *keys* – navigate to view the level of the appropriate channel (0 = 10).

Level meter

It displays the current audio level for this channel. The view point for this meter is post trimmer and pre- / post-fader, based on the disk mix selection. The scale being used is dBFS.

Gain meter

It displays the total gain on the channel including make-up gain. The scale being used is dB.

Attack button

(Attack Speed) It controls the amount of gain slewing which will generally slow the response to attack transients only. (Valid range: **0.1** – **5.0** – **100.0 ms**, Value step: 0.1)

Attack button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exception(s):

- ***BACKSPACE*** *key* –
  1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Decay button

(Decay Speed) It controls the decay speed of the peak detector used by the dynamics processing. (Valid range: **10** – **100** – **1000 ms**, Value step: 1)

Decay button Shortcuts

See: Common Data Entry Field Shortcuts List {**p.159**}

Thresh button

(Compressor Threshold) It sets the threshold above which gain reduction occurs according to the Compressor Ratio setting. (Valid range: **-20.0 dB** – **-6.0** – **0.0 dB**, Value step: 0.1)

Thresh button Shortcuts

See: Common Data Entry Field Shortcuts List {**p.159**}, with the following exception(s):

- ***BACKSPACE*** *key* – 1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Ratio button

(Compressor Ratio) It sets the compressor ratio, i.e. 4.0:1 means for every 1 dB above the Compressor Threshold the gain will be reduced 4 dB. (Valid range: **4.0:1** – **20.0:1**, Value step: 0.1)

Ratio button Shortcuts

See: Common Data Entry Field Shortcuts List {**p.159**}

- ***BACKSPACE*** *key* – 1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Gain button

(Make up Gain Setting) It is used to compensate for the gain reduction caused by the action of the compressor. (Valid range: **0.0** – **3.0** – **6.0 dB**, Value step: 0.1)

Gain button Shortcuts

See: Common Data Entry Field Shortcuts List {**p.159**}, with the following exception(s):

- ***BACKSPACE*** *key* – 1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Inc button

Pressing it increments the selected parameter by its step value.

Dec button

Pressing it decrements the selected parameter by its step value.

Output Mix page

Page purpose: This page routes the 8 analog inputs and 8 digital inputs directly to the outputs. The analog and digital outputs for each channel receive identical signals. This can be used to feed monitors, video recorders, Comtek transmitters, Ear Wig feeds, additional analog or digital recorders or any other device that accepts the signals.

How to get here:
- (***MENU*** *key* → ***Output Mix*** *button*)

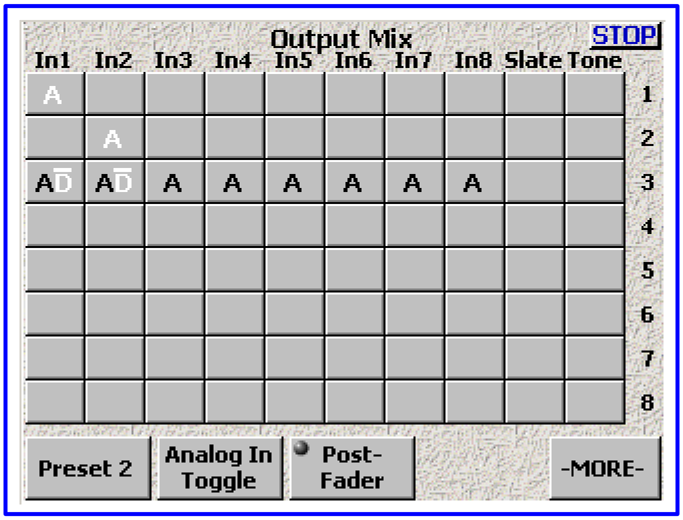


Figure 3-7 Output Mix page

Page Notes

- In this page, the top line shows the 8 available input channels (In1 – In8) plus the slate mic and the tone generator. The vertical line of numbers on the right shows the 8 available output channels. The bottom row of buttons controls the parameters of the matrix selections.
- In ***Figure 3-7*** {above}, pre-fader analog input #1 is routed to output #1 (i.e. Boom-1), pre-fader analog input #2 is routed to output #2 pre-fader (i.e. Boom-2) and the ten track mix, consisting of post-fader analog inputs 1 – 8 and pre-fader digital inputs 1 and 2, are routed to Output #3 (i.e. the Director's feed).

Page Level Shortcuts

None

Output Mix matrix buttons

They connect the Input Channel to the appropriate Output Channel(s).

Pressing one of the buttons cycles through the available choices, based on the setting of the ***(Analog / Digital) In Toggle*** *button*, ***Phase Invert*** *button* and ***(Pre- / Post-) Fader*** *button*.

Indicator	*Description*
Black **A**	Analog input post-fader
Black **A** with Line	Analog input post-fader with signal phase inverted
White **A**	Analog input pre-fader
White **A** with Line	Analog input pre-fader with signal phase inverted
Black **D**	Digital input post-fader
Black **D** with Line	Digital input post-fader with signal phase inverted
White **D**	Digital input pre-fader
White **D** with Line	Digital input pre-fader with signal phase inverted

Table 3-4 Indicator Descriptions

Slate buttons

Pressing one of them selects / deselects (indicated by an **X**) sending the slate source on the associated path.

Tone buttons

Pressing one of them selects / deselects (indicated by an **X**) sending tone on the associated path.

Preset button

Pressing it allows you to save and recall up to five saved settings. Think of each preset as a page on which to write the configuration.

To save a configuration, perform the following:

1) Move to the Preset # you want to build. Normally, the first to be built would be Preset 1.
2) If you have not previously saved anything into the preset, it will be a blank slate (pun intended). Establish all of the required items for this preset.
3) If you need to establish any additional presets, repeat steps 1 & 2 for each additional configuration.

To load a configuration once it has been saved, simply press the ***Preset*** *button* until the number displayed is the one you're expecting. At that point, examine the configuration; it will be as you had saved it. If, at any time, you need to update the configuration, inset your changes, they are automatically saved.

NOTES: 1) The Limit column settings are not saved in a specific preset #.
2) The Output Routing settings are not saved in a specific preset #.

(Analog / Digital) In Toggle button

Press it to select either analog or digital inputs. Selecting a box once enables it, selecting it again disables it.

(Pre- / Post-) Fader button

Pressing it allows you to choose whether each selection is pre- or post-fader. For example, you can record the microphone on one channel of the Deva post-fader and on another pre-fader, so it is unaffected by the mix. (See ***Table 3-4***)

-MORE- button

Pressing it pages through the buttons displayed on the bottom of the page.

Clear All button

Pressing it removes all selections in the matrix and empties the page.

NOTES: 1) The Limit column settings are not cleared when this button is pressed.
2) The Output Routing settings are not cleared when this button is pressed.

Phase Invert button

Pressing it reverses the phase of the selected input. A reversed phase input appears with a bar over the letter (A/D). (See ***Table 3-4***)

Limiter Settings button

Pressing it displays the ***Output Limiter Settings page*** {**p.51**}.

Output Limiting button

Pressing it displays an additional column on the right used to flag which tracks have limiting enabled. With it displayed, pressing any of the boxes will turn ON limiting for that track, indicated by an **X**. Pressing it again turns OFF limiting for that track. The one set of parameters under the ***Limiter Settings*** *button* is used by all of these limiters.

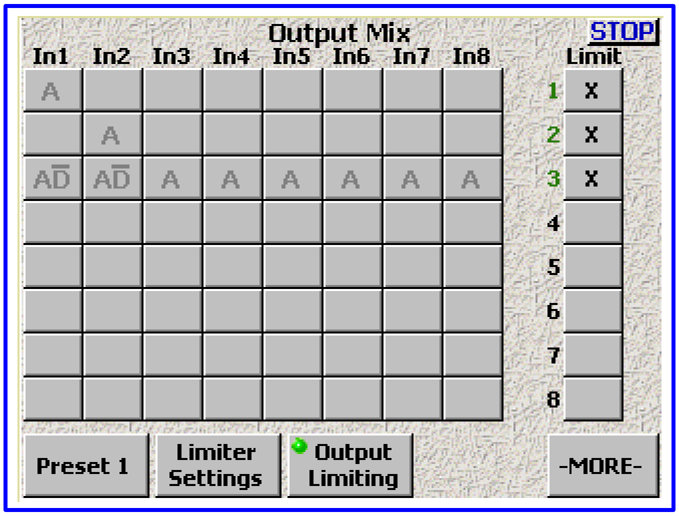


Figure 3-8 Output Mix – Limit column page

Limit buttons

Pressing one or more of them enables the limiter (indicated by an **X**) for the associated channel(s). Settings for the limiter are maintained by the ***Output Limiter Settings page*** {**p.51**}.

Routing Presets button

Pressing it displays the ***Output Routing Presets page*** {**p.53**}.

Output Routing button

Pressing it displays three additional columns on the right used to flag the source of each output during Playback mode, Stop mode and Record mode. With it displayed, pressing any of the boxes will turn ON / OFF audio coming from the channel during each operation mode, indicated by a number if ON. The ***Routing Presets*** *button* displays the page that manages the Playback routings, as a group.

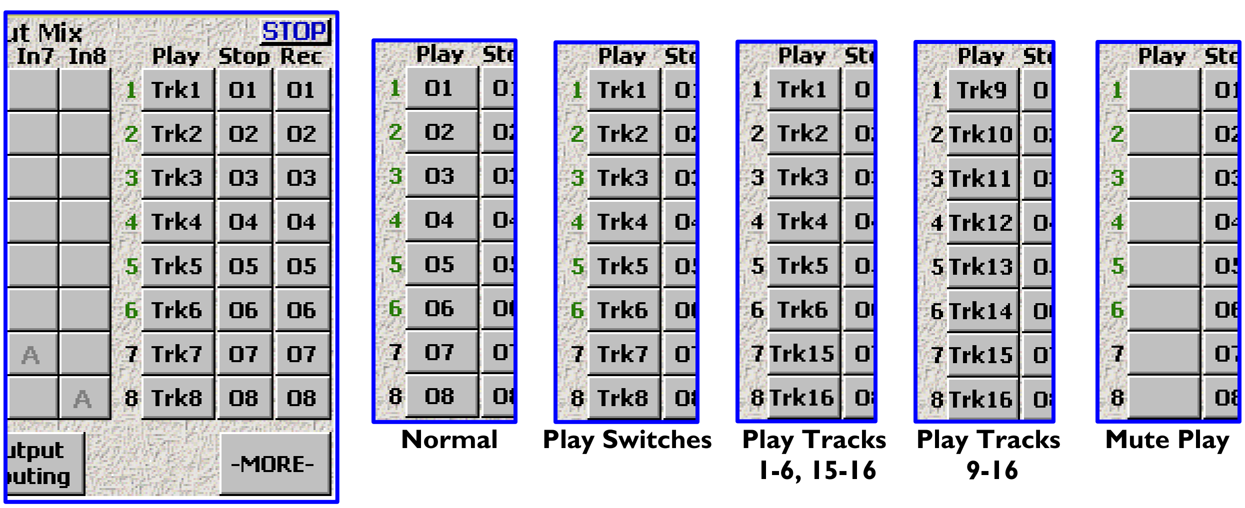


Figure 3-9 Output Mix – Output Routing columns page

NOTE: The Analog and Digital Outputs are essentially identical, with the exception that there are 6 Analog Outputs and 8 Digital Outputs. Outputs 1 through 6 are the same in both groups.

Play buttons

These indicate what will be sent to each output while the Deva is in Play mode.

For example, if I have a Boom Operator on Output 1, and his audio is being recorded on track 1, I would set his ***Play*** *button* to **Trk1** so he will be able to hear his audio during playback.

Stop buttons

These indicate what will be sent to each output while the Deva is in Stop mode.

For example, if I don't want to have anyone hear any audio while in Stop mode, I can clear out all of the ***Stop*** *buttons* (leaving all of the ***Stop*** *button*s blank).

Rec buttons

These indicate what will be sent to each output while the Deva is in Record mode.

For example, if I have the mix being recorded on track 3 and I want to send it to the Director and Script Supervisor on Output 3, I would set it to **03** and they will hear the audio while we are recording a Take.

Output Limiter Settings page

Page purpose: The limiter prevents the output signal (analog or digital) from clipping or exceeding 0 dBFS. When the signal exceeds the threshold value, the limiter automatically reduces the input signal while it is above this limit.

How to get here:

- (***MENU*** *key* → ***Output Mix*** *button* → ***Limiter Settings*** *button*)

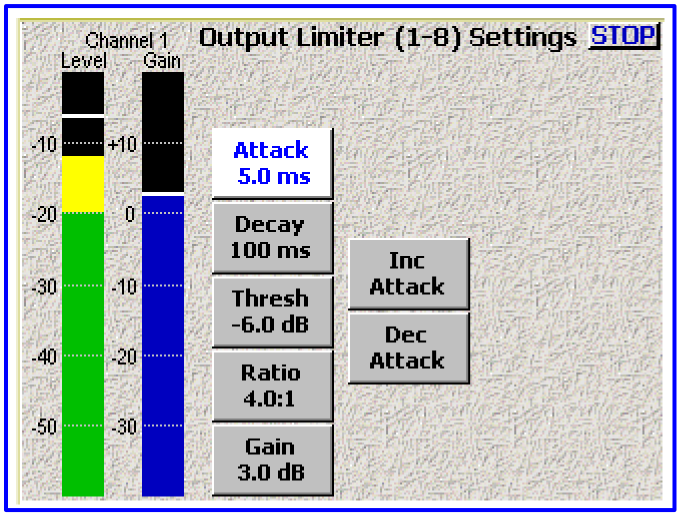


Figure 3-10 Output Limiter Settings page

Page Notes

- You have three methods to change each parameter on this page:
  - Click on a parameter, it turns White. The ***Inc*** *button* or ***Dec*** *button* pick up a parameter title. Pressing either button will adjust the parameter in its respective direction.
  - Click on a parameter, it turns White. Click on the White button and a value field appears. Directly enter the value and press the ***ENTER*** *key*.
  - Use the ***UP*** or ***DOWN ARROW*** *key* to select the parameter button and press the ***ENTER*** *key* (on the keyboard) to open it for modification. Directly enter the value and press the ***ENTER*** *key*.
- If you enter a value that is out of the valid range, the closest in range value is applied.

Page Level Shortcuts

- ***UP / DOWN ARROW*** *keys* – navigate through the left hand column of buttons
- ***1 – 8*** *keys* – navigate to view the level of the appropriate channel.

Level meter

It displays the current audio level for this channel. The view point for this meter is post trimmer and pre- / post-fader, based on the output mix selection. The scale is in dBFS.

Gain meter

It displays the total gain on the channel including make-up gain. The scale is in dB.

Attack button

(Attack Speed) It controls the amount of gain slewing which will generally slow the response to attack transients only. (Valid range: **0.1** – **5.0** – **100.0 ms**, Value step: 0.1)

Attack button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exception(s):

- ***BACKSPACE*** *key* –
  1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Decay button

(Decay Speed) It controls the decay speed of the peak detector used by the dynamics processing. (Valid range: **10** – **100** – **1000 ms**, Value step: 1)

Decay button Shortcuts

See: *Common Data Entry Field Shortcuts List* {**p.159**}

Thresh button

(Compressor Threshold) It sets the threshold above which gain reduction occurs according to the Compressor Ratio setting. (Valid range: **-20.0** – **-6.0** – **0.0 dB**, Value step: 0.1)

Thresh button Shortcuts

See: *Common Data Entry Field Shortcuts List* {**p.159**}, with the following exception(s):

- ***BACKSPACE*** *key* –
  1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Ratio button

(Compressor Ratio) It sets the compressor ratio, i.e. 4.0:1 means for every 1 dB above the Compressor Threshold the gain will be reduced 4 dB. (Valid range: **4.0:1** – **20.0:1**, Value step: 0.1)

Ratio button Shortcuts

See: *Common Data Entry Field Shortcuts List* {**p.159**}

- ***BACKSPACE*** *key* –
  1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Gain button

(Make up Gain Setting) It is used to compensate for the gain reduction caused by the action of the compressor. (Valid range: **0.0** – **3.0** – **6.0 dB**, Value step: 0.1)

Gain button Shortcuts

See: *Common Data Entry Field Shortcuts List* {**p.159**}, with the following exception(s):

- ***BACKSPACE*** *key* –
  1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Inc button

Pressing it increments the selected parameter by its step value.

Dec button

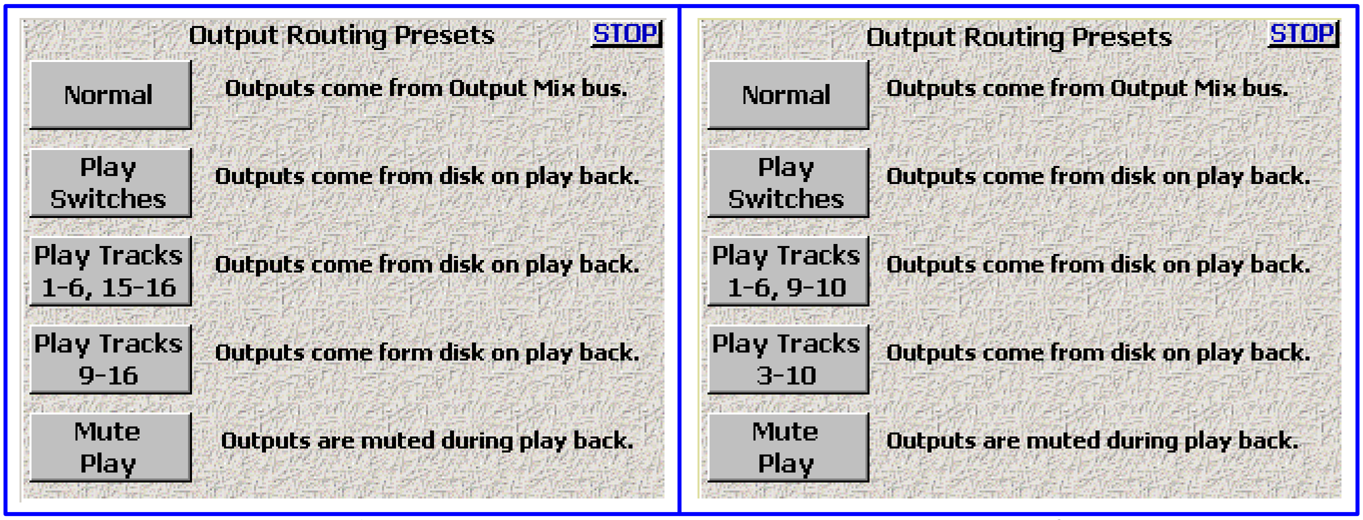
Pressing it decrements the selected parameter by its step value.

Output Routing Presets page

Page purpose: This page sets-up the Play column of the Output Routing section for the Output Mix.

How to get here:

- (***MENU*** *key* → ***Output Mix*** *button* → ***Routing Presets*** *button*)



Deva-16 view Deva-5.8 view

Figure 3-11 Output Routing Presets page

Page Notes

Once you have made your selection on this page, go to the previous page to see what effect your choice had.

Page Level Shortcuts

None

Normal button

Outputs come from the Output Mix bus.

Play Switches button

Outputs come from the disk on playback.

Play Tracks 1-6, 15-16 button (Deva-16 only)
Play Tracks 1-6, 9-10 button (Deva-5.8 only)

This button varies based on the hardware:

- **Deva-16:** ***Play Tracks 1-6, 15-16*** *button*. As the label indicates, it sets the playback tracks to 1-6, 15 & 16.
- **Deva-5.8:** ***Play Tracks 1-6, 9-10*** *button*. As the label indicates, it sets the playback tracks to 1-6, 9 & 10.

Play Tracks 9-16 button (Deva-16 only)
Play Tracks 3-10 button (Deva-5.8 only)

This button varies based on the hardware:

- **Deva-16:** ***Play Tracks 9-16*** *button*. As the label indicates, it sets the playback tracks to 9-16.
- **Deva-5.8:** ***Play Tracks 3-10*** *button*. As the label indicates, it sets the playback tracks to 3-10.

Mute Play button

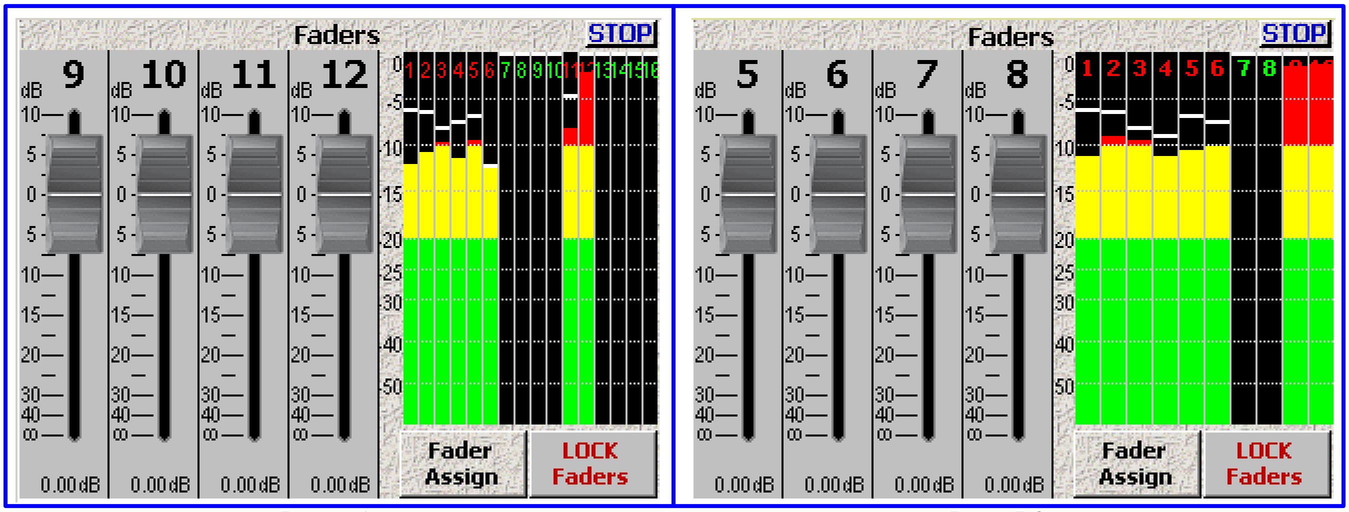
Outputs are muted during playback.

Faders page

Page purpose: Displays the four touch faders and allows you to assign and lock adjustments to the faders. The touch faders operate the same way the hardware faders do. You can use your finger or any PDA stylus to adjust the on-screen faders.

How to get here:

- (***MENU*** *key* → ***Faders*** *button*)



Deva-16 view Deva-5.8 view

Figure 3-12 Touch Fader page

Page Notes

- These faders are not suitable for a channel that needs to be constantly adjusted.
- Only one of these faders can be adjusted at a time.

Page Level Shortcuts

None

Input graphic faders

They can be assigned, just like the physical faders on the front panel. Only one can be adjusted at a time. (Valid range: **+10.0** – **0.0** – **-58.0 dB**, Value step: variable 0.25 – 1.00)

Input (#) meters & buttons

They display all of the track levels, since you can't display the ***Home page*** {**p.35**} while working with these faders.

Arm / Disarm a Recording Track

Pressing the ***SHIFT*** *key* on Deva's front panel while pressing the appropriate meter on the ***Touch Fader page*** {**p.54**}, arms / disarms the recording of that channel. Disarmed tracks are indicated by a line drawn through the track's meter.

Fader Assign button

Pressing it displays the ***(Knob / Touch) Fader Assign page*** {**p.55**}.

Lock Faders button

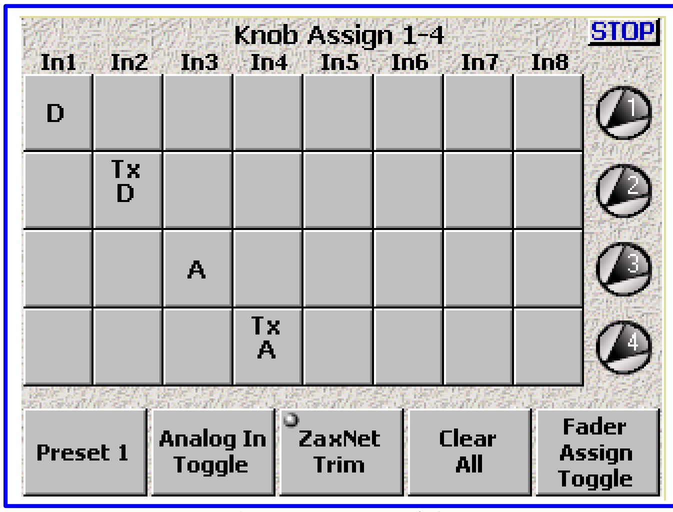
Pressing it toggles locking / unlocking the touch faders.

(Knob / Touch) Fader Assign page

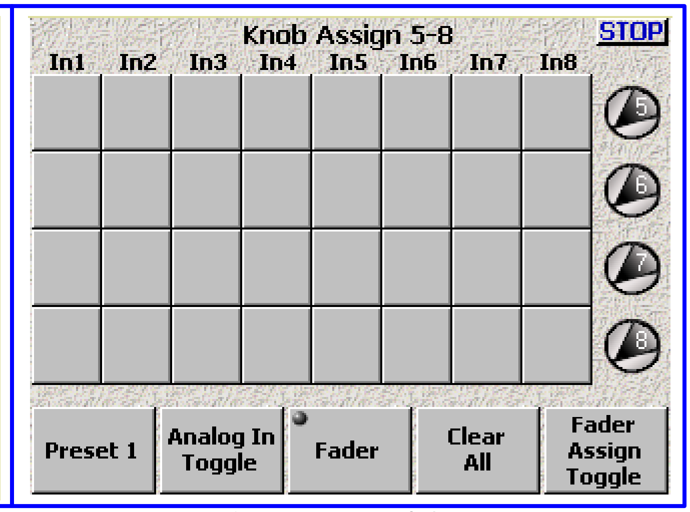
Page purpose: This page allows you to assign any of the 8 analog and 8 digital inputs to any or all of the 4 faders. You can assign any of the inputs to either touch or hardware faders.

How to get here:

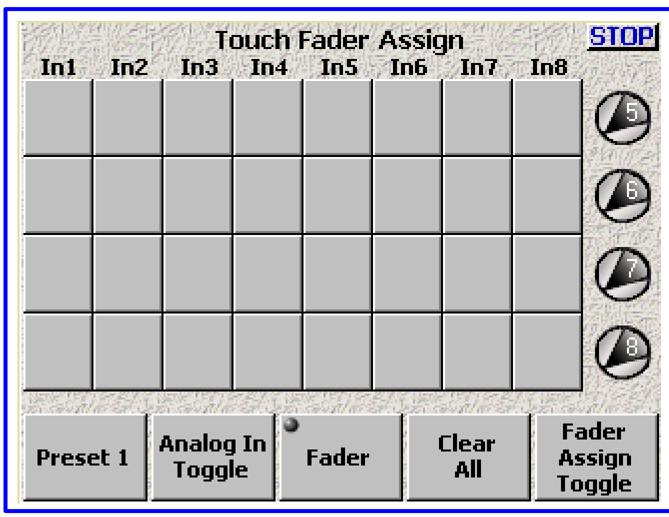
- (***MENU*** *key* → ***Faders*** *button* → ***Fader Assign*** *button*)



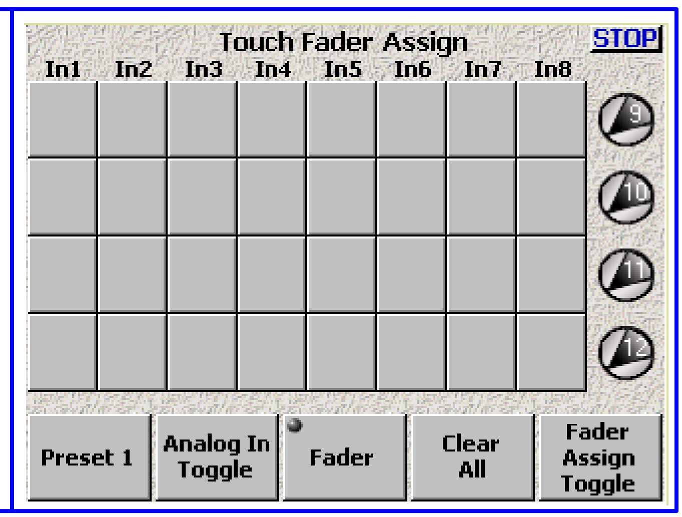
Deva-16 Knob Fader 1-4 Assign view
Deva-5.8 Knob Fader 1-4 Assign view



Deva-16 Knob Fader 5-8 Assign view



Deva-5.8 Touch Fader 5-8 Assign view



Deva-16 Touch Fader 9-12 Assign view

Figure 3-13 Knob / Touch Fader Assign page

NOTE: If you will be riding the level of an input, you should not assign it to a touch fader.

Page Notes

In this page, the top line shows the 8 available input channels (In1 – In8). The vertical line of numbers on the right shows the 12 available faders (1 – 8 are the rotary faders on the ***Front Panel Description*** {**p.25**}, 9 – 12 are the touch faders on the ***Faders page*** {**p.54**}). The bottom row of buttons controls the parameters of the matrix selections.

Indicator	Description
A	Analog input path, recorder's pre-amp is assigned
Tx A	Analog input path, transmitter's pre-amp is assigned
D	Digital input path, recorder's input is assigned
Tx D	Digital input path, transmitter's pre-amp is assigned

Table 3-5 Indicator Descriptions

Page Level Shortcuts

None

Knob Assign matrix buttons

Pressing it cycles through the available indicators to control which input(s) are assigned to which front panel fader(s). It is possible to assign one or more inputs to a single fader. It is also possible to assign one input to two or more faders.

Touch Fader Assign matrix buttons

Pressing it cycles through the available indicators to control which input(s) are assigned to which of the touch fader(s). It is possible to assign one or more inputs to a single fader. It is also possible to assign one input to two or more faders.

Preset button

Pressing it allows you to save and recall up to five saved settings. Think of each preset as a page on which to write the configuration.

To save a configuration, perform the following:

1) Move to the Preset # you want to build. Normally, the first to be built would be Preset 1.
2) If you have not previously saved anything into the preset, it will be a blank slate (pun intended). Establish all of the required items for this preset.
3) If you need to establish any additional presets, repeat steps 1 & 2 for each additional configuration.

To load a configuration once it has been saved, simply press the ***Preset*** *button* until the number displayed is the one you're expecting. At that point, examine the configuration; it will be as you had saved it. If, at any time, you need to update the configuration, inset your changes, they are automatically saved.

(Analog / Digital) In Toggle button

Pressing it toggles between the analog and digital inputs. You can assign any combination of digital and/or analog inputs to each fader.

(Fader / ZaxNet Trim) button

- **Fader** – Indicates any change made to the fader affects the Deva's preamp for this channel.
- **ZaxNet Trim** – Indicates any change made to the fader will send a ZaxNet command to adjust the transmitter's preamp associated with this channel.

Clear All button

Pressing it clears all inputs on the page.

Fader Assign Toggle button

Pressing it cycles through several screens within the page to allow all hardware faders and touchscreen faders to be assigned.

Timecode page

Page purpose: This page allows you to maintain timecode and user-bits related data.

How to get here:

- (*TIME CODE key*)
- (*MENU key → Time Code button*)

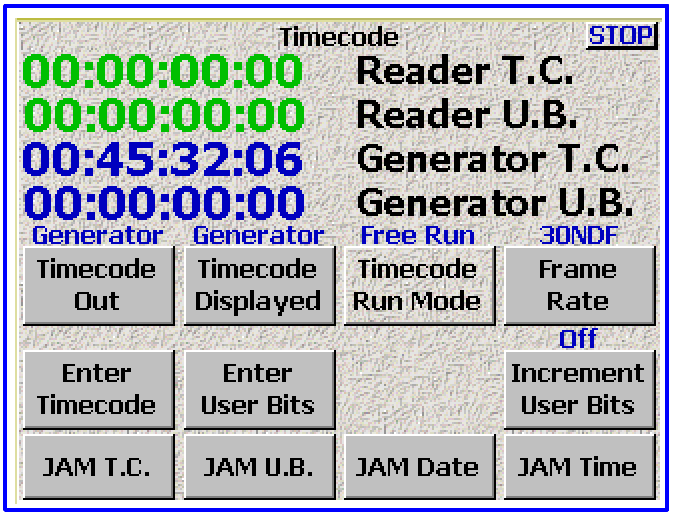


Figure 3-14 Timecode page

Page Notes

IMPORTANT: While this page is displayed, Deva **STOPS** transmitting on ZaxNet. Once this page is closed, communications over ZaxNet resume. This allows you to jam a non-ZaxNet compatible slate.

Page Level Shortcuts

None

Reader T.C. field

It displays TC from an external source. If no external TC is present, you may temporarily see three **Green** question marks (**???**). They indicate that no external TC is being sensed by the Deva. When a TC source is connected, the ***Reader T.C.*** *field* will also display the estimated frame-rate.

Reader U.B. field

It displays any external source's user-bits, if any.

Generator T.C. field

It displays the Deva's locally generated TC.

Generator U.B. field

It displays the Deva's locally generated user-bits.

Timecode Out button

- **Generator** – TC comes from the internal generator.
- **Disk** – TC comes from the file being recorded or played-back. The ***Generator T.C.*** *field* contains:
  - While in Playback – TC at the current place in the Take.
  - While in Playback and press Stop – TC at the point where playback will re-start (by pressing ***PLAY*** *key*)
  - While in Record – TC being recorded during the Take, as it happens.
  - While in Record and press Stop – TC for the start of the last Take.

NOTE: When you have a timecode device attached (i.e. IFB100) that is forwarding timecode to recorders (i.e. TRX900) and you want to use the Auto-Load setting in the distant recorders, use **Disk** here.

Timecode Displayed button

- **Generator** – TC comes from the internal generator. The ***Generator T.C.*** *field* displays the running TC.
- **Disk** – TC comes from the file being recorded or played-back. The ***Generator T.C.*** *field* contains:
  - While in Playback – TC at the current point in the Take.
  - While in Playback and press Stop – TC at the point where playback will re-start (by pressing ***PLAY*** *key*)
  - While in Record – TC being recorded during the Take, as it happens.
  - While in Record and press Stop – TC for the start of the last Take.
- **Gen Stop** – TC comes from the Primary Drive or the playback source. The ***Generator T.C.*** *field* contains:
  - While in Playback – TC at the current point in the Take.
  - While in Record – TC being recorded during the Take, as it happens.
  - While in Stop – Running TC coming from the internal generator.

NOTE: When you want to see the start timecode after a Take has completed, use **Disk** here.

Timecode Run Mode button

Pressing it displays the ***Timecode Run Mode page*** {**p.59**}.

Frame Rate button

Pressing it cycles through the following timecode frame-rates: **23.98** (23.976), **24**, **25**, **29.97NDF**, **29.97DF**, **30NDF** and **30DF**.

Enter Timecode button

Pressing it loads the timecode generator with a specified value.

Enter Timecode button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

Enter User Bits button

Pressing it loads the user-bit store with a specified value.

Enter User-Bits button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exception(s):

- ***F1 – F6*** *keys* – are mapped to the hex letters A – F.

Increment User Bits button

Pressing it toggles between incrementing (**On**) and not incrementing (**Off**) the user-bits. When **On**, the Deva increments the last digit in the user-bits each time you go into Record mode.

NOTE: When incrementing is turned ON, it will increment the entire length.

JAM T.C. button

Pressing it jams the internal timecode generator from an external source.

JAM U.B. button

Pressing it jams the internal user-bits store from an external source.

JAM Date button

Pressing it jams the internal user-bits store from the Deva's date, entered in the ***Time/Date page*** {**p.80**}.

JAM Time button

Pressing it jams the timecode generator from Deva's Time-of-Day clock, entered in the ***Time/Date page*** {**p.80**}.

DUAL RATE TIMECODE

A feature of the Deva allows it to sync to one timecode frame-rate and record another. For instance, you can input 23.98 timecode from an HD camera and record 29.97 timecode derived from it. The two frame-rates will be in perfect sync matching up at frame one of each second. Deva will hold perfect timecode sync even when cycling power. Many other timecode clocks can gain or lose a frame each time power is cycled.

Timecode Run Mode page

Page purpose: This page manages the timecode generator.

How to get here:

- (***TIME CODE*** *key* → ***Timecode Run Mode*** *button*)
- (***MENU*** *key* → ***Time Code*** *button* → ***Timecode Run Mode*** *button*)

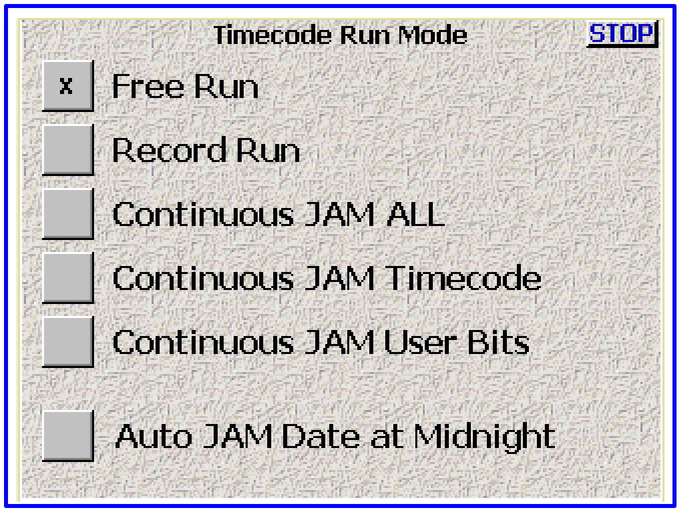


Figure 3-15 Timecode Run Mode page

Page Notes

None

Page Level Shortcuts

None

Timecode Runmode buttons

Select one of the following:

- ***Free Run*** *button* – Timecode runs continuously from either 00:00:00:00 or whatever valid timecode number you enter (you can also jam timecode from the Deva's 'Time of Day' clock).
- ***Record Run*** *button* – Timecode starts and stops as you Record and Stop.
- ***Continuous JAM ALL*** *button* – Continuously jams timecode and user-bits from an external source.
- ***Continuous JAM Timecode*** *button* – Continuously jams only the timecode. The user-bits can be set independently.
- ***Continuous JAM User Bits*** *button* – Continuously jams the user-bits, while the timecode Free Runs independently. This mode allows a second timecode to be input as user-bits from an external source.

Auto JAM Date at Midnight button

It indicates whether or not the Deva will automatically jam the user-bits with the date at midnight.
Default value: not selected

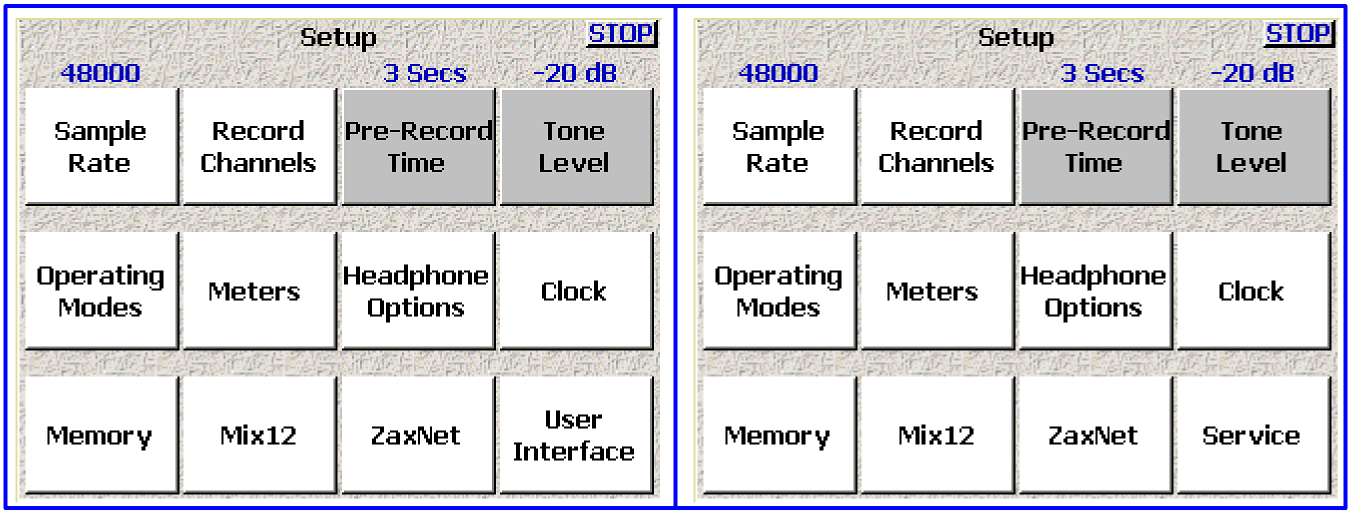
> **NOTE:** If you are shooting dusk to dawn, don't enable Auto Jam Date at Midnight. This will ensure that all recorded Takes from the same production day have the same date in the user-bits.

Setup page

Page purpose: It sets the main operating parameters such as sample-rate, number of channels, sync reference, etc.

How to get here:

- (***MENU*** *key* → ***Setup*** *button*)



Standard view　　　　With Service button

Figure 3-16 Setup page

Page Notes

None

Page Level Shortcuts

None

Sample Rate button

Pressing it displays the ***Sample Rate page*** {**p.62**}.

Record Channels button

Pressing it displays the ***Record Track Select page*** {**p.63**}.

Pre-Record Time button

Pressing it cycles through **Off**, **1 Secs**, **2 Secs**, **3 Secs**, **4 Secs**, **5 Secs**, **6 Secs**, **7 Secs**, **8 Secs**, **9 Secs** and **10 Secs**. This means that the Deva, using a memory buffer, begins recording a set number of seconds before the ***REC*** *key* is pressed. This eliminates 'pre-roll' problems at video transfer houses, and is invaluable in documentary recording where events are not predictable.

> **IMPORTANT:** Pre-record time is only available when recording at 48.048 kHz and below. It is disabled at higher sampling-rates.

Tone Level button

Pressing it cycles the level through **-20**, **-18**, **-16**, **-14** and **-12 dB**. The scale is in dBFS.

Operating Modes button

Pressing it displays the ***Operating Mode page*** {**p.64**}.

Meters button

Pressing it displays the ***Meter Menu page*** {**p.67**}.

Headphone Options button

Pressing it displays the ***Headphone Options page*** {**p.74**}.

Clock button

Pressing it displays the ***Time/Date page*** {**p.80**}.

Memory button

Pressing it displays the ***Memory page*** {**p.82**}.

Mix12 button

Pressing it displays the ***Mix12 Setup page*** {**p.83**}.

ZaxNet button

Pressing it displays the ***ZaxNet Setup page*** {**p.84**}.

User Interface button

Pressing it displays the ***User Interface Settings page*** {**p.85**}.

Service button

Pressing it displays the ***Deva Service Menu Warning page*** {**p.140**}.

Sample Rate page

Page purpose: Selects the sampling-rate being used to record audio.

How to get here:

- (***MENU*** *key* → ***Setup*** *button* → ***Sample Rate*** *button*)

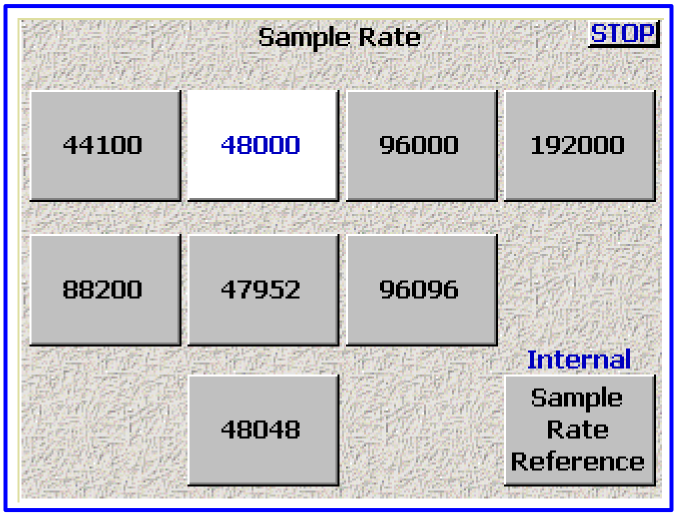


Figure 3-17 Sample Rate page

Page Notes

When using 192000, it is recommended that you do a Factory Restore Defaults to erase all possible settings that may be draining digital signal processing horsepower. If the unit does NOT boot, hold the **0** (zero) *key* while booting to force 48 kHz.

Page Level Shortcuts

None

Sample-rate buttons

NOTE: You should select the highest sampling-rate that will be used on any device.

Except for when recording at the 'pull up' or 'pull down' sampling-rates, where you can mix and match any of those sampling-rates among any of the drives, use the highest sampling-rate that will be used on any device. For example, if you want to write a FireWire DVD at 96 kHz, then this setting must be at least 96 kHz. All other sampling-rates will be extrapolated from this one. If you record at 48 kHz on the Primary Drive, but wish to mirror a DVD-RAM at 48.048 kHz, that is perfectly acceptable. But when using two vastly different sampling-rates, set the Primary Drive to the higher of those rates. Default setting: 48000

Sample Rate Reference button

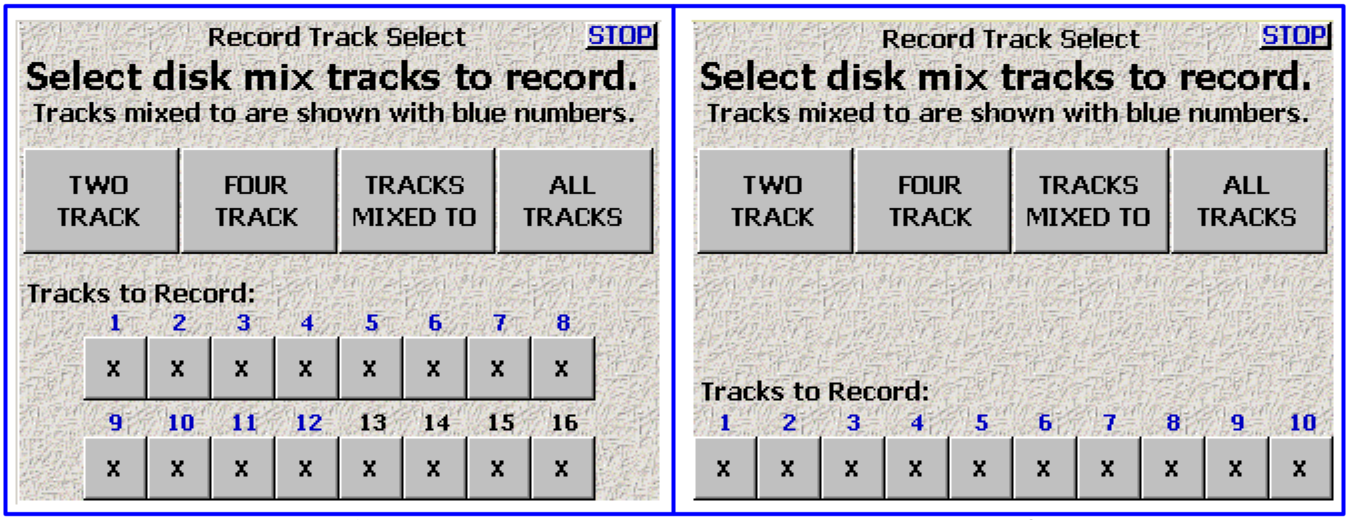
- **Internal** – This locks the Deva to its own internal reference. Select this mode when recording using the analog inputs.
- **AES 1/2** – In this mode, Deva syncs with the timing signal being received on digital input 1 or 2. If the AES signal is lost or not present, it defaults to Internal. Make sure Deva's sample-rate setting ALWAYS matches that of the incoming AES signal

Record Track Select page

Page purpose: This page determines which tracks will be recorded.

How to get here:

- (***MENU*** *key* → ***Setup*** *button* → ***Record Channels*** *button*)



Deva-16 view Deva-5.8 view

Figure 3-18 Record Track Select page

Page Notes

- For MOST situations, you can leave this page set to **TRACKS MIXED TO**.

Page Level Shortcuts

None

Two Track button

Pressing it enables tracks one and two.

Four Track button

Pressing it enables tracks one through four.

Tracks Mixed To button

Pressing it automatically enables any tracks that are selected in the ***Disk Mix page*** {**p.42**}.

All Tracks button

Pressing it enables all of the available tracks. Default setting

Tracks to Record buttons

Press each track button to individually enable it, as necessary.

Operating Mode page

Page purpose: This page manages several of the Deva's operating parameters.

How to get here:

- (***MENU*** *key* → ***Setup*** *button* → ***Operating Modes*** *button*)

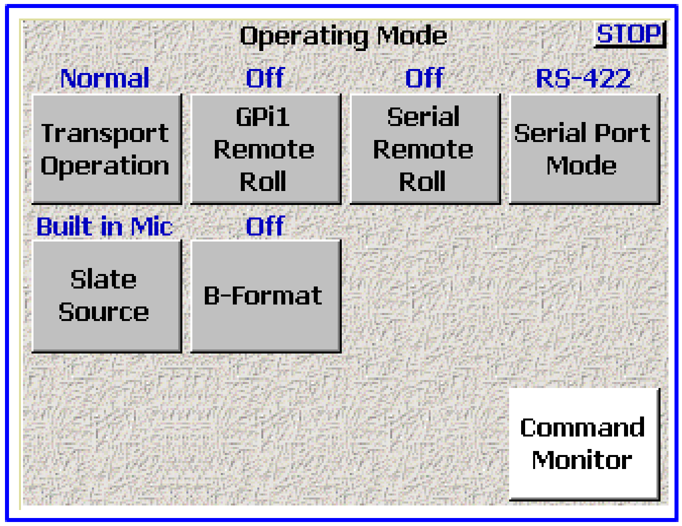


Figure 3-19 Operating Mode page

Page Notes

None

Page Level Shortcuts

None

Transport Operation button

- **Normal** – All functions are controlled by the main transport buttons.
- **Auto-load** – The Deva ***REC*** *key* is disabled. The Deva is now looking for an external TC source to control going into and out of Record mode, such as an HD camera's recorder. When the camera goes into Record mode, the Deva also goes into Record mode.

NOTE: While in **Auto-load** mode, the ***REC*** *key* blinks at regular intervals (~6 secs) to remind you of the choice.

IMPORTANT: Obviously, as part of the **Auto-load** selection, this requires the appropriate timecode cable / wireless kit connection with the camera that will be controlling the recording.

NOTE: As part of the **Auto-load** selection, the Deva jams the local Reader / Generator with the incoming TC.

GPi1 Remote Roll button

Pressing it enables / disables external transport control using a contact closure switch:

- **Off** – Normal Deva Operating mode.
- **Rising Edge** – Places the Deva into Record mode when the contact is opened.
- **Falling Edge** – Places the Deva into Record mode when the contact is closed.

NOTE: See ***Chapter 10*** {**p.173**}) for information about pin-outs for the connector. This includes GPi1, RS-232 and RS-422.

Serial Remote Roll button

Pressing it enables (**On**) or disables (**Off**) the remote control of the Deva using the serial port.

Serial Port Mode button

It is used in conjunction with the Serial Remote Roll. Pressing it toggles the protocol used over the serial port: **RS-232** or **RS-422**.

Slate Source button

Pressing it toggles the slate source between the Deva's **Built in Mic** and the **Camera In** connector.

B-Format button

Pressing it enables (**On**) or disables (**Off**) the B-Format decoder.

Command Monitor button

Pressing it displays the ***Remote Command Monitor page*** {**p.66**}.

Remote Command Monitor page

Page purpose: This page displays communications between the Deva and the connected Mix-12 / Mix-8.

How to get here:

- (**MENU** *key* → **Setup** *button* → **Operating Modes** *button* → **Command Monitor** *button*)

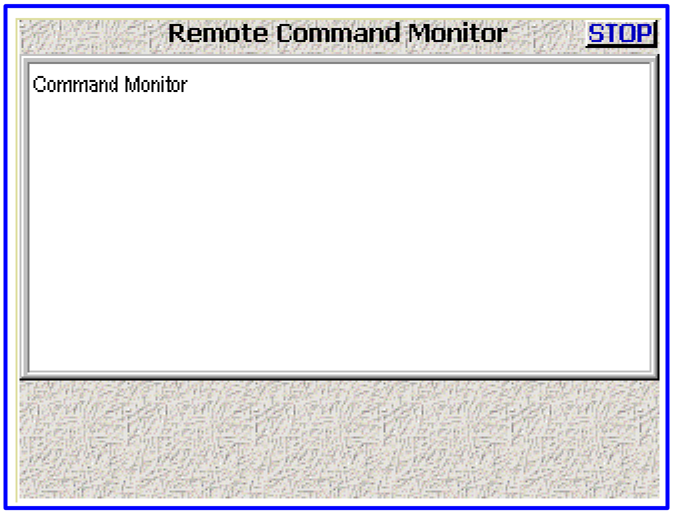


Figure 3-20 Command Monitor page

Page Notes

None

Page Level Shortcuts

None

Meter Menu page

Page purpose: This page provides metering options, which includes how many meters are shown on the **Home page** {**p.35**}, the meter's orientation and their size.

How to get here:

- (***MENU*** *key* → ***Setup*** *button* → ***Meters*** *button*)

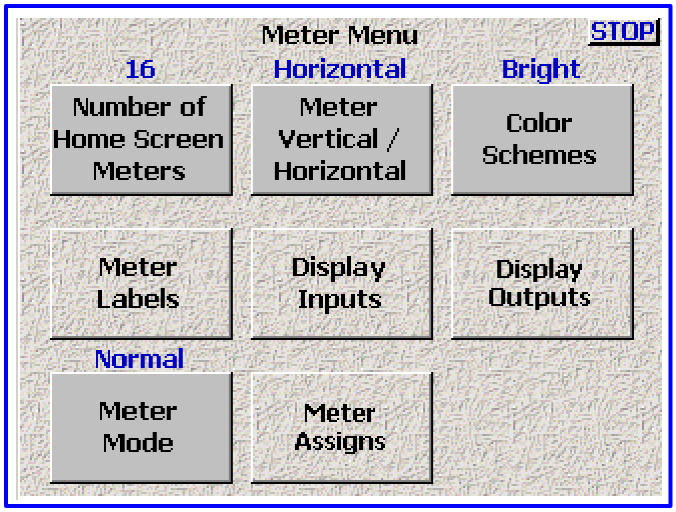


Figure 3-21 Meter Menu page

Page Notes

None

Page Level Shortcuts

None

Number of Home Screen Meters button

Pressing it cycles the number of meters (**4** – **16***) displayed on the **Home page** {**p.35**}.
Default setting: **Max track count** (*Deva-5.8 = 4 – **10**, Deva-16 = 4 – **16**)

Meter Vertical / Horizontal button

Pressing it cycles the **Home page** {**p.35**} through the following layouts:

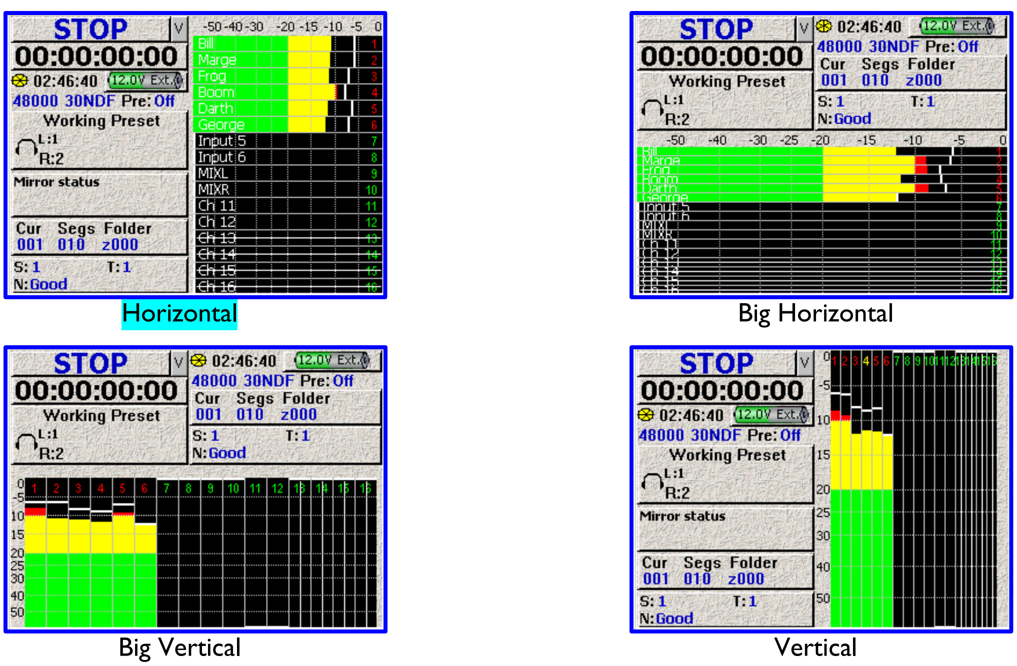
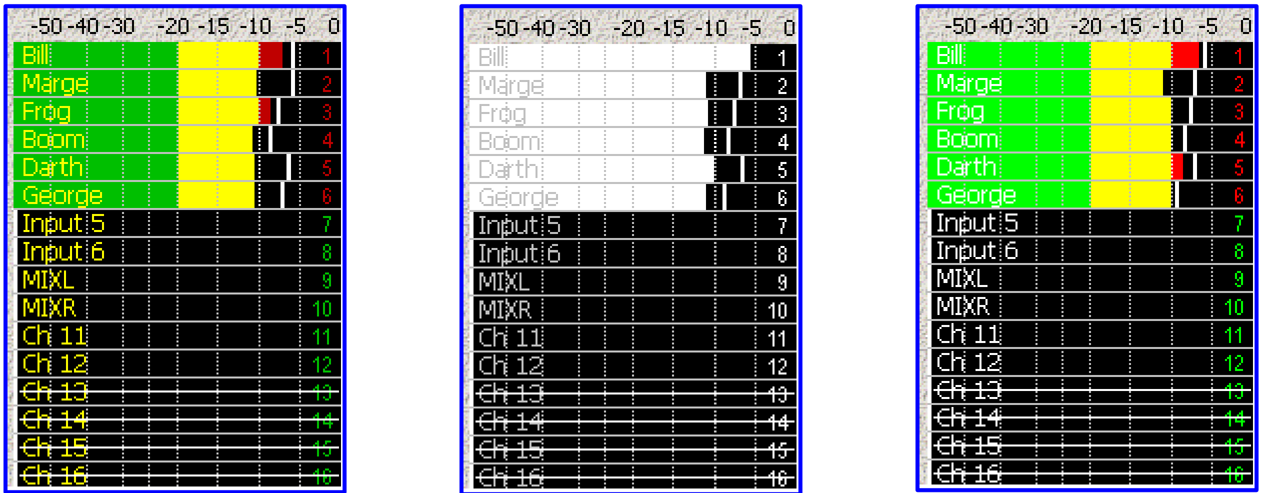


Figure 3-22 Examples of Home page layouts

NOTE: Due to space restrictions, only horizontal meters have labels.

Color Schemes button

Pressing it changes the appearance of the Audio Level meters only. The following examples are based on the Horizontal layout, for illustration purpose:



Normal Black & White Bright

Figure 3-23 Effects of the Color Schemes button

Meter Labels button

Pressing it displays the ***Meter Labels page*** {**p.69**}.

Display Inputs button

Pressing it displays the ***Input Meter Menu page*** {**p.70**}.

Display Outputs button

Pressing it displays the ***Output Meter Menu page*** {**p.71**}.

Meter Mode button

- **Normal** – The meters operate normally.

WARNING: The following choices cause the meters to display audio that is not present. Do **NOT** select any of them while you are actively recording.

- **Demo** – Shows a continuously variable display, without any audio source
- **Show Full Scale** – Shows all tracks at full scale
- **Show 0dB** – Shows all tracks at the 0dB point (-20 dBFS)
- **Show Stepped** – Show the first six tracks in stair-step fashion. Track 1 is 0 dBFS and Track 6 is –50 dBFS.

Meter Assigns button

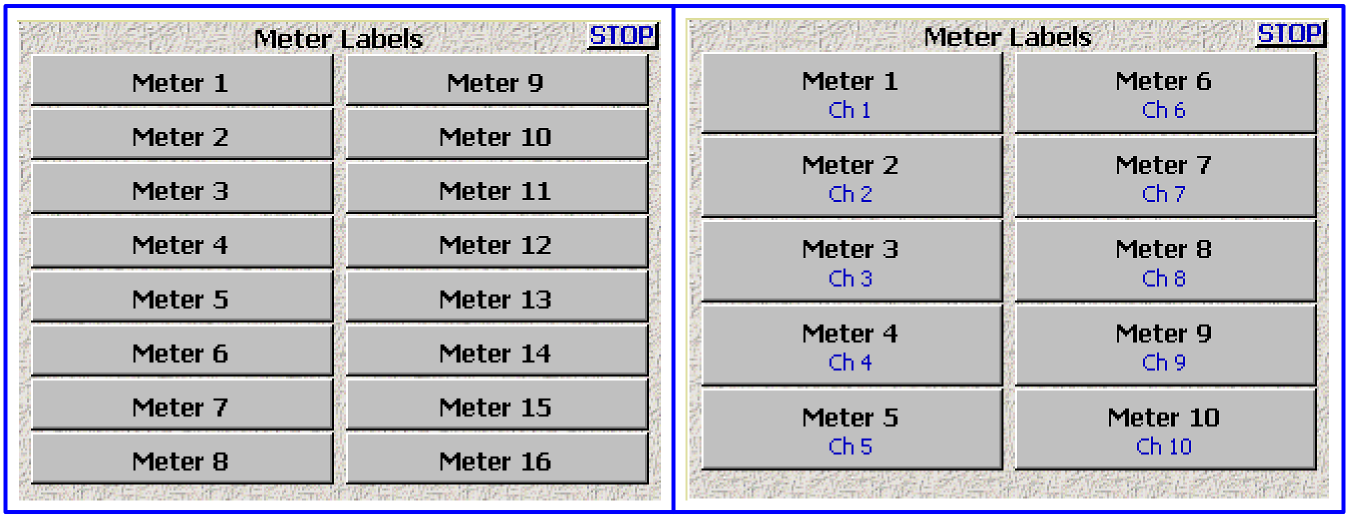
Pressing it displays the ***Meter Assignments page*** {**p.72**}.

Meter Labels page

Page purpose: Opens a window that allows you to enter descriptive text for any or all of the meters.

How to get here:

- (***MENU*** *key* → ***Setup*** *button* → ***Meters*** *button* → ***Meter Labels*** *button*)



Deva-16 view Deva-5.8 view

Figure 3-24 Meter Labels page

Page Notes

None

Page Level Shortcuts

- ***0 – 9*** *keys* – displays the ***Keyboard page*** {**p.135**} for entry of the label text (0 = 10).

Meter (#) Label buttons

Pressing any button displays the ***Keyboard page*** {**p.135**} for entry of the label text.
Maximum characters per label: 16 Default setting: **'Ch' & (the channel number)**

Meter (#) Label buttons Shortcuts

See: ***Keyboard page*** {**p.135**}, with the following exception(s):

- ***TAB*** *key* – advances the data entry field to the next label in sequence.

Input Meter Menu page

Page purpose: Simultaneously displays all of the input levels.

How to get here:

- (**MENU** key → **Setup** button → **Meters** button → **Display Inputs** button)

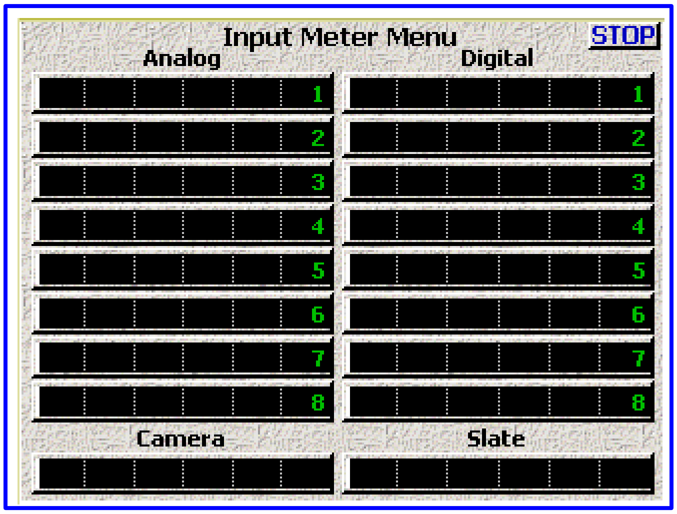


Figure 3-25 Input Meter Menu page

Page Notes

Although all of the meters can be pressed, there is no action programmed to occur because of being pressed.

Page Level Shortcuts

None

Input Level meters

They graphically display the current level in each input channel.

Output Meter Menu page

Page purpose: Simultaneously displays all of the output levels.

How to get here:

- (***MENU*** *key* → ***Setup*** *button* → ***Meters*** *button* → ***Display Outputs*** *button*)

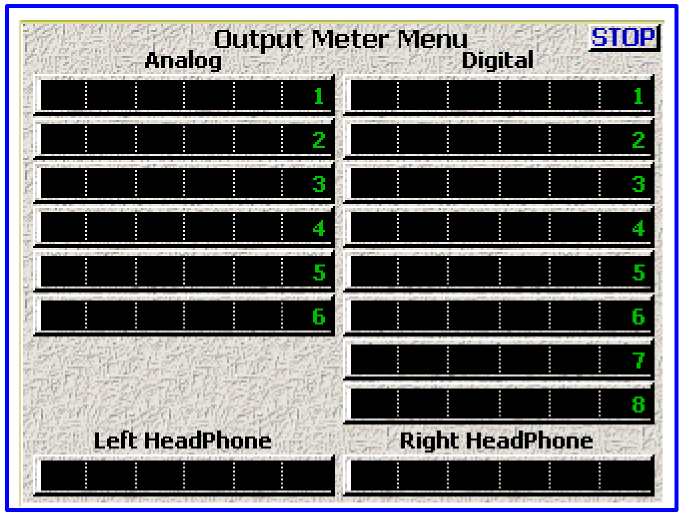


Figure 3-26 Output Meter Menu page

Page Notes

- Although all of the meters can be pressed, there is no action programmed to occur because of being pressed.
- The Output Faders 1 – 4 (on the Mix-12) are after their respective meters. The end result: you will NOT see a change in output level for those channels if you adjust their faders.

WARNING: Since Outputs 1 – 4 are the way they are, their audio could be drastically different from what is indicated. **ALWAYS** turn down the levels before listening to any of them.

Page Level Shortcuts

None

Output Level meters

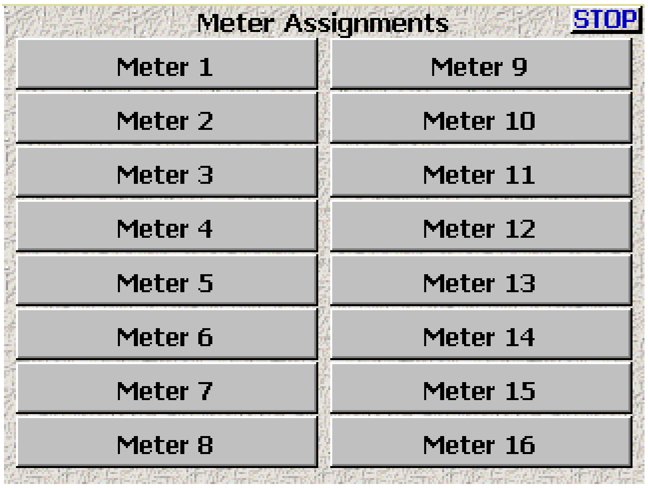
They graphically display the current level of each output channel.

Meter Assignments page

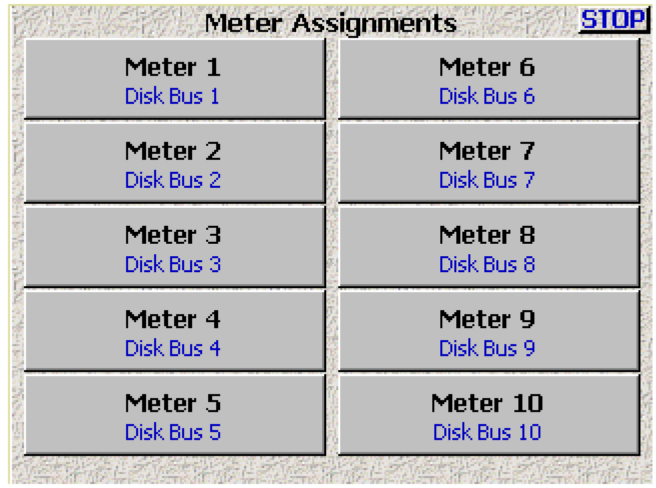
Page purpose: This page displays what type of track source is assigned to each meter.

How to get here:

- (***MENU*** *key* → ***Setup*** *button* → ***Meters*** *button* → ***Meter Assigns*** *button*)



Deva-16 view



Deva-5.8 view

Figure 3-27 Meter Assignments page

Page Notes

None

Page Level Shortcuts

None

Meter (#) Assignment buttons

Pressing any button displays the ***Meter (#) Assignment page*** {**p.73**} for that meter position.

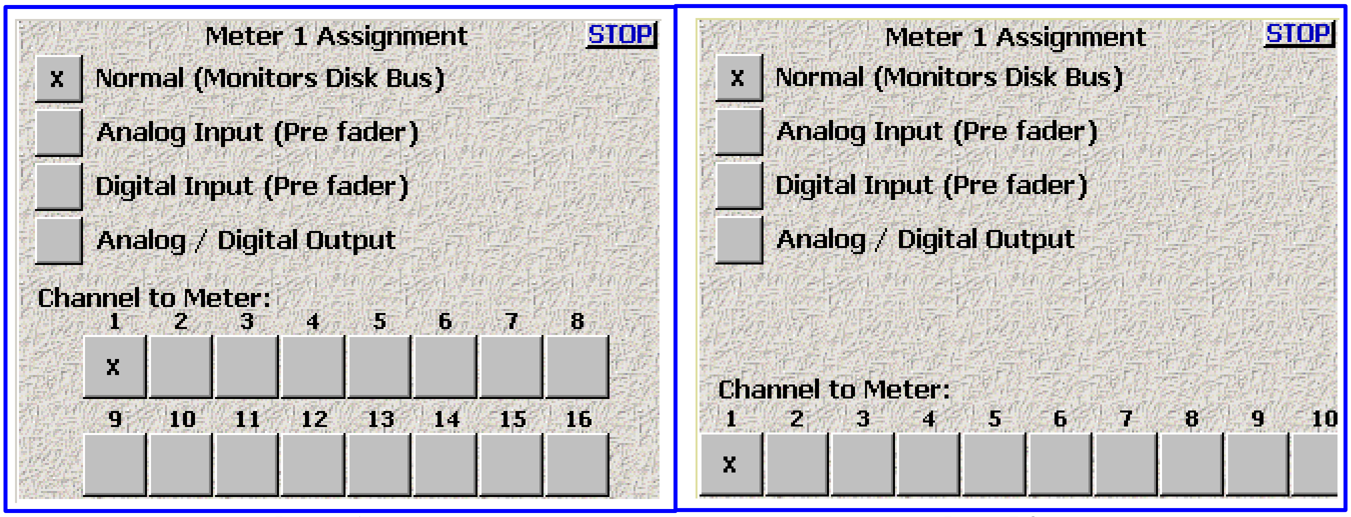
Default setting: **Disk Bus** & (Meter Number)

Meter (#) Assignment page

Page purpose: This page assigns which track each meter is displaying.

How to get here:

- (**MENU** key → **Setup** button → **Meters** button → **Meter Assigns** button → **Meter (#) Assignment** buttons)



Deva-16 view Deva-5.8 view

Figure 3-28 Meter (#) Assignment page

Page Notes

None

Page Level Shortcuts

None

Meter Insertion Point buttons

Select one of the following:

- ***Normal (Monitors Disk Bus)*** *button*
- ***Analog Input (Pre fader)*** *button*
- ***Digital Input (Pre fader)*** *button*
- ***Analog / Digital Output*** *button*

Channel to Meter buttons

Select only one channel to be displayed on this meter.

Default setting: **X** on the Channel # of the meter

Headphone Options page

Page purpose: Opens a new window providing additional options for the headphones when monitoring.

How to get here:

- (***MENU*** *key* → ***Setup*** *button* → ***Headphone Options*** *button*)



Figure 3-29 Headphone Options page

Page Notes

None

Page Level Shortcuts

None

Headphone Alarm Tone button

Pressing this button toggles all audible alarms **On** or **Off**.

With this button turned **On**, pressing the ***REC*** *key* causes a single beep at the headphones only while pressing the ***STOP*** *key* causes two beeps.

Headphone Mix button

Pressing it displays the ***Headphone Mix page*** {**p.75**}.

Mute Unrecorded Tracks button

When enabled (**YES**), all tracks not being recorded are muted. When disabled (**NO**), all tracks are included, except those that are disarmed.

This allows you to have multiple inputs to the Deva still configured, but monitor only those that are currently being recorded.

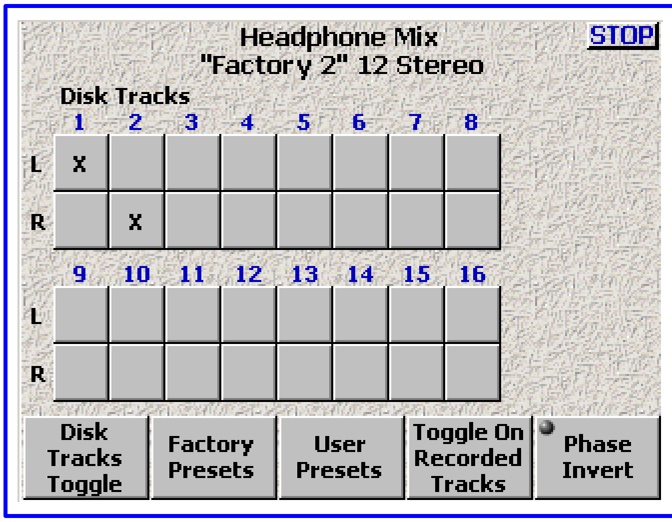
Headphone Mix page

Page purpose: This page routes the recorded tracks to the headphones. An audio channel can be placed in the left, right, or both headphone channels. The monitoring is E to E. You are listening to what is being recorded to the Primary Drive.

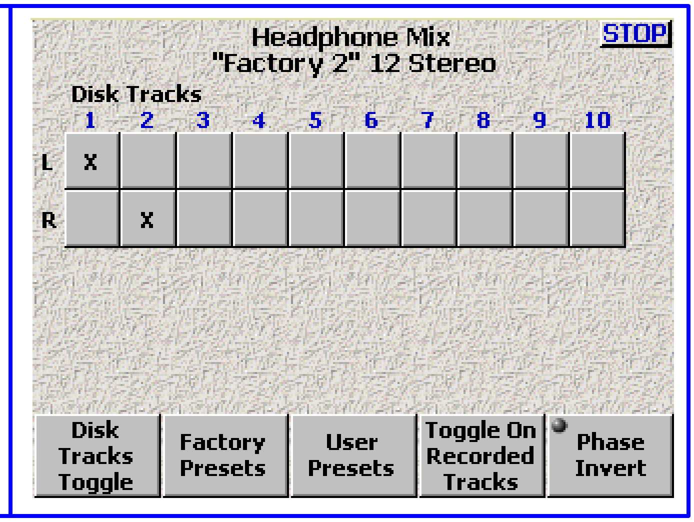
How to get here:

- (***HEADPHONE*** *key*)
- (***MENU*** *key* → ***Setup*** *button* → ***Headphone Options*** *button* → ***Headphone Mix*** *button*)

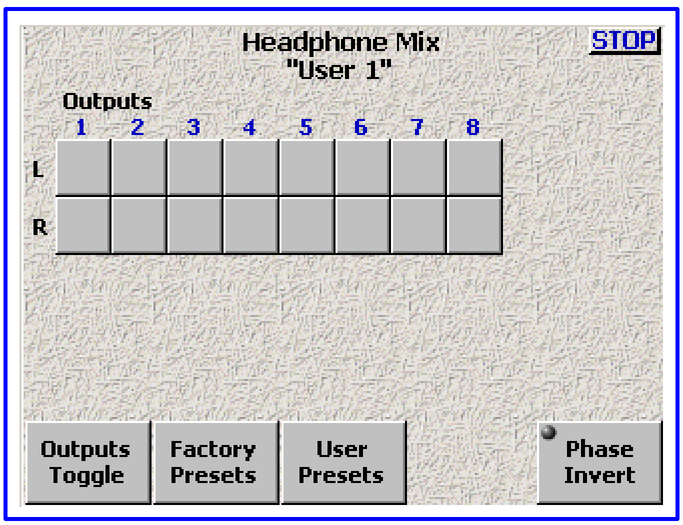
NOTE: Using the ***Headphone Options page*** {**p.74**}, you can toggle headphone alarm tone, or Mute Unrecorded Tracks. Also, using the ***Operating Mode page*** {**p.64**}, you can enable the surround field monitor for monitoring the B format produced by the SoundField microphone.



Deva-16 Disk Tracks view

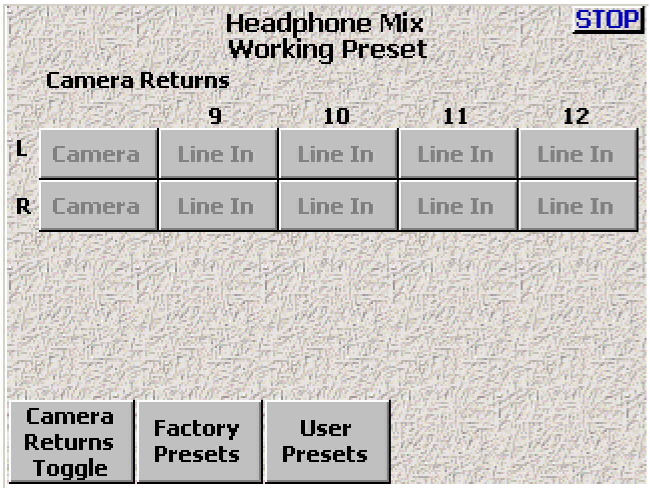


Deva-5.8 Disk Tracks view

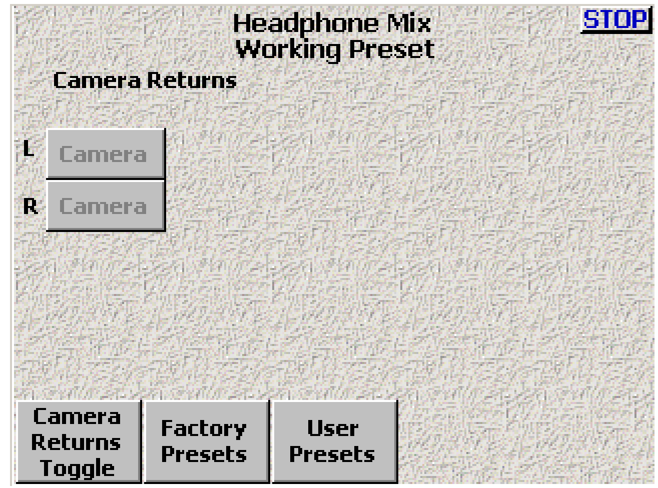


Deva-16 Outputs view
Deva-5.8 Outputs view

Figure 3-30 Headphone Mix page (part 1)



Deva-16 Camera Returns view



Deva-5.8 Camera Returns view

Figure 3-31 Headphone Mix page (part 2)

> **NOTE:** The camera feed is a mono return. While there are two camera return feeds, they are internally summed to mono.

> **NOTE:** In Deva-5.8, the following limits apply. In the ***Disk Tracks*** *view*, there are 10 tracks. In the ***Camera Returns*** *view*, only the ***Camera*** *buttons* are displayed.

Page Notes

None

Page Level Shortcuts

None

Preset Loaded Name field

It appears just below the page title and indicates which preset (User or Factory) is currently loaded. If it is not a saved preset, **Working Preset** is displayed. Default setting: Factory 2

Disk Tracks matrix buttons

Pressing them selects which disk track(s) being recorded will be monitored. Left (**L**) and right (**R**) *buttons* send the specific track(s) to the left and/or right ear cups.

Outputs matrix buttons

Pressing them selects which output channels will be monitored. Left (**L**) and right (**R**) *buttons* send the specific track(s) to the left and/or right ear cups.

Camera Returns matrix buttons

Pressing them selects which Camera Returns will be monitored. Left (**L**) and right (**R**) *buttons* send the specific track(s) to the left and/or right ear cups.

> **NOTE:** To monitor a single channel in both the left and right headphone mix, select it in both the left and right sides.

(Disk Tracks / Outputs / Camera Returns) Toggle button

Pressing it cycles through the **Disk Tracks**, **Outputs** and **Camera Returns** views.

Factory Presets button

Pressing it displays the ***Factory Presets page*** {**p.78**}.

User Presets button

Pressing it displays the ***(Load / Save) User Presets page*** {**p.79**}.

Toggle On Recorded Tracks button

Pressing it automatically selects all tracks that are being recorded.

Phase Invert button

Pressing it reverses the phase of the monitored channel. This does not change the phase of the recorded channel, it only reverses phase in the monitor. The selected matrix button will have a line over the **X**.

NOTE: The phase invert follows any previous phase adjustment done in the recording matrices. If you have reversed the phase for a channel, you do not have to reverse the phase here. It is already reversed.

Factory Presets page

Page purpose: Allows you to quickly access any of the 20 commonly used headphone configurations. These are pre-programmed into the Deva and are always available.

How to get here:

- (***HEADPHONE*** *key* → ***Factory Presets*** *button*)
- (***MENU*** *key* → ***Setup*** *button* → ***Headphone Options*** *button* → ***Headphone Mix*** *button* → ***Factory Presets*** *button*)

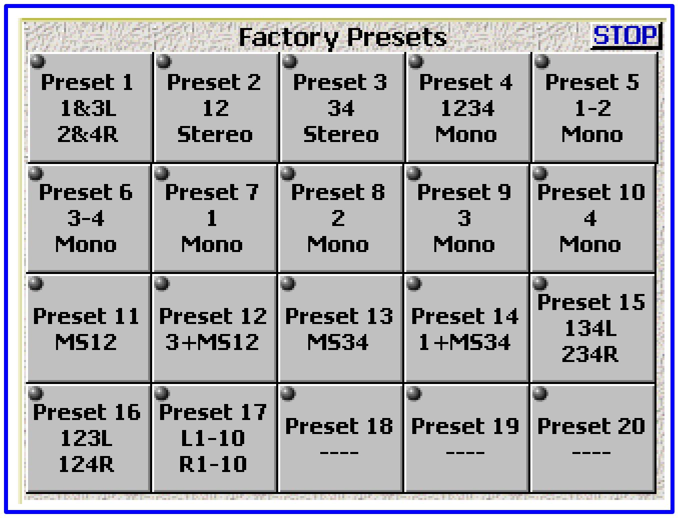


Figure 3-32 Factory Presets page

Page Notes

None

Page Level Shortcuts

None

Preset (#) buttons

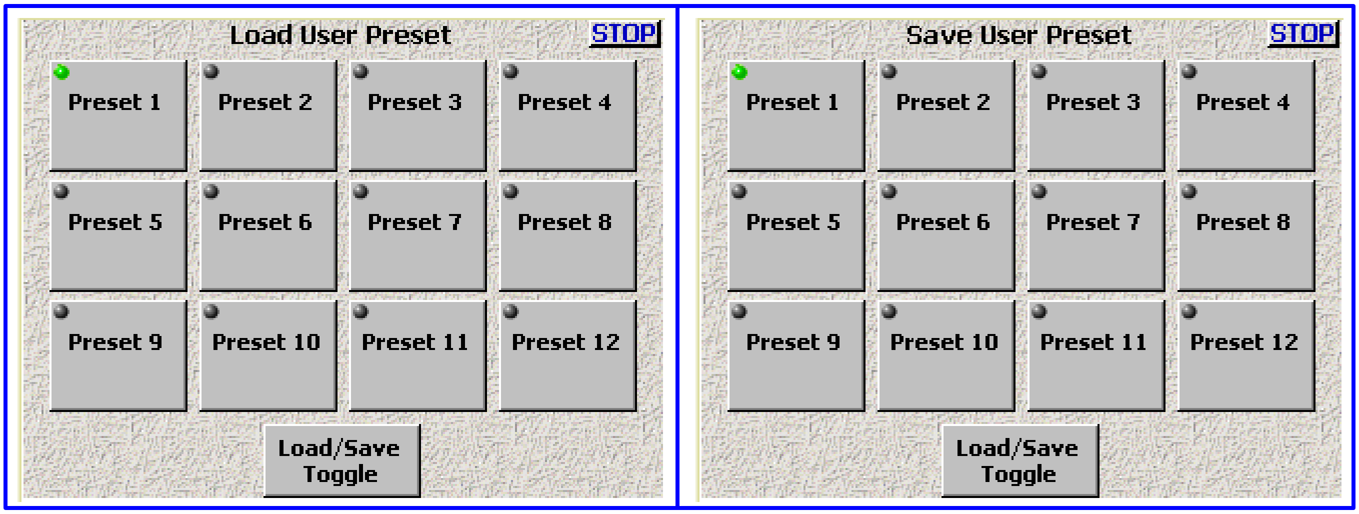
Pressing one of them loads the selected headphone configuration. The LED in the selected preset turns **Green**.

(Load / Save) User Presets page

Page purpose: You can set and name up to twelve user presets for headphone monitoring.

How to get here:

- (***HEADPHONE*** *key* → ***User Presets*** *button*)
- (***MENU*** *key* → ***Setup*** *button* → ***Headphone Options*** *button* → ***Headphone Mix*** *button* → ***User Presets*** *button*)



Load User Preset view Save User Preset view

Figure 3-33 (Load / Save) User Presets page

Page Notes

None

Page Level Shortcuts

None

Preset (#) buttons

- While the page title says **Save User Preset**:
  Pressing one of the ***Preset (#)*** *buttons* saves the headphone configuration and brings up the ***Keyboard page*** {**p.135**} to enter the preset's name. The name of each preset can have a maximum of eight characters. The LED in the selected preset turns **Green**.
- While the page title says **Load User Preset**:
  Pressing one of ***Preset (#)*** *buttons* loads the headphone configuration previously saved in that preset and the LED in the selected preset turns **Green**.

Load/Save Toggle button

Toggles the function and title of the page between **Load** and **Save**.

Time/Date page

Page purpose: This page maintains the source for the time and date stamp placed within the metadata of each recorded track; it is also the clock that can be used to jam timecode with Time of Day.

How to get here:
- (***MENU*** *key* → ***Setup*** *button* → ***Clock*** *button*)

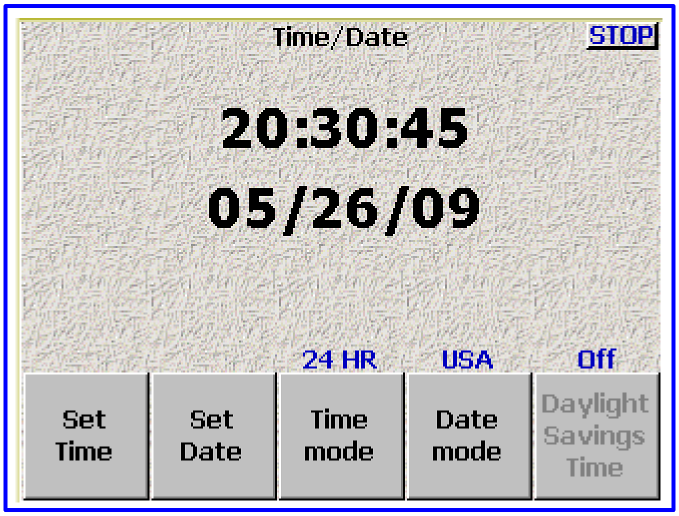


Figure 3-34 Time/Date page

Page Notes

The date and time maintained by this page is only used in the ***Timecode page*** {**p.57**} to jam the Date, Time or both.

Page Level Shortcuts

None

Time field

It displays the current time and is used to maintain it when the ***Set Time*** *button* is pressed.

Date field

It displays the current date and is used to maintain it when the ***Set Date*** *button* is pressed.

Set Time button

Pressing it opens the ***Time*** *field* to allow changes. Use the numeric keys to enter the time and press this button again (or the ***ENTER*** *key*) to accept the new time.

Set Time button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exceptions:

- ***LEFT / RIGHT ARROW*** *keys* – do not have any effect
- ***BACKSPACE*** *key* – The cursor moves left without deleting any characters.

IMPORTANT: When you start entering a new time, the clock freezes until the ***Set Time*** *button* (or the ***ENTER*** *key*) is pressed. The clock will then continue from the value you entered.

Set Date button

Pressing it opens the ***Date*** *field* to allow changes. Use the numeric keys to enter the date and press this button again (or the ***ENTER*** *key*) to accept the new date.

Set Date button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exceptions:

- ***LEFT / RIGHT ARROW*** *keys* – do not have any effect
- ***BACKSPACE*** *key* – The cursor moves left without deleting any characters.

Time mode button

- **12 HR** – Displays the time in 12-hour format with AM / PM indication.
- **24 HR** – Displays the time in 24-hour format.

IMPORTANT: When sending time to an external device, use the **24 HR** value.

Date mode button

- **USA** – Sets the date format to (month / day / year).
- **EUROPE** – Sets the date format to (day / month / year).

IMPORTANT: When using Time-of-Day to jam Aaton devices, use the **Europe** setting.

Daylight Savings Time button

Pressing it enables (**On**) / disables (**Off**) the automatic change in-to and out-of Daylight Savings Time.

NOTE: The ***Daylight Savings Time*** *button* is not currently implemented.

Memory page

Page purpose: While many of the configuration items on the Deva have their own save option, so they can be recalled later, some do not. This page allows you to save and recall every setting that has been previously saved. After performing firmware updates, you will sometimes be required to press the ***Restore Factory Defaults*** *button*. The instructions with the firmware update will usually state if it is required.

How to get here:

- (***MENU*** *key* → ***Setup*** *button* → ***Memory*** *button*)

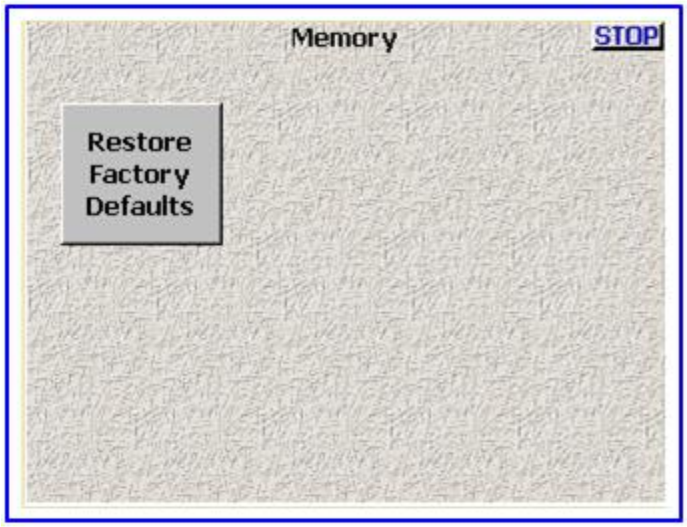


Figure 3-35 Memory page

Page Notes

None.

Page Level Shortcuts

None

Restore Factory Defaults button

Pressing it resets all settings to the factory established defaults.

NOTE: Not all firmware updates require you to press the ***Restore Factory Defaults*** *button*. Information with the firmware update will indicate if it is necessary.

Mix12 Setup page

Page purpose: Enables the use of a control surface with the Deva and sets a few operating parameters.

How to get here:

- (***MENU*** *key* → ***Setup*** *button* → ***Mix12*** *button*)

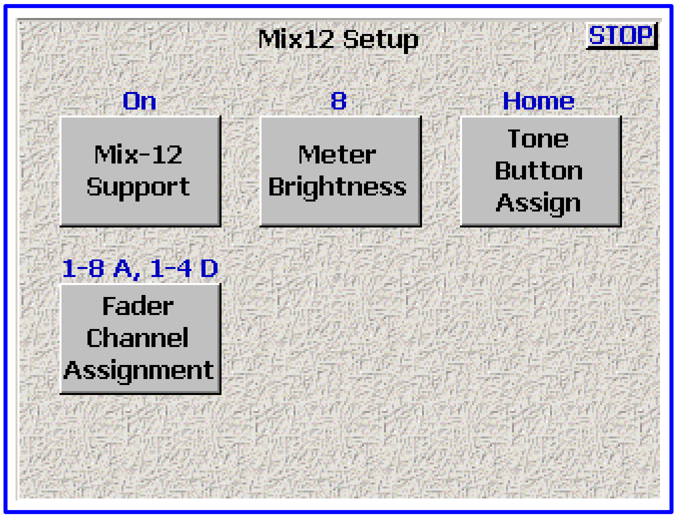


Figure 3-36 Mix-12 Setup page

Page Notes

None

Page Level Shortcuts

None

Mix-12 Support button

This button has three settings:

- **Off** – No control surface is connected
- **Mix12** – A Mix-12 control surface is connected
- **Mix8** – A Mix-8 control surface is connected

NOTE: After turning **On** Mix-12 support, you need to cycle the Deva's power.

NOTE: After disconnecting a Mix-12, you need to cycle the Deva's power.

Meter Brightness button

Pressing it adjusts the LED brightness on the Mix-12 console. The brightness can be set from **1** (dimmest) to **8** (brightest).

Tone Button Assign button

Pressing it sets the action of the ***TONE*** *key* on the Mix-12 console. The options are:

- **Tone** – Leaves the ***TONE*** *key* assigned to the tone function
- **Home** – Assigns the ***TONE*** *key* to go to the ***Home page*** {**p.35**}.
- **Escape** – Assigns the ***TONE*** *key* to go back one page.
- **Play** – Assigns the ***TONE*** *key* to Play
- **Unassigned** – Disables the ***TONE*** *key*

Fader Channel Assignment button

Pressing it changes the breakout of analog vs. digital channels controlled by the Mix-12 control surface. The options are:

- **1-8 A, 1-4 D** – Assigns Analog inputs 1-8 to the first 8 channels and Digital inputs 1-4 to the last 4 channels.
- **1-6 A, 1-6 D** – Assigns Analog inputs 1-6 to the first 6 channels and Digital inputs 1-6 to the last 6 channels.
- **1-4 A, 1-8 D** – Assigns Analog inputs 1-4 to the first 4 channels and Digital inputs 1-8 to the last 8 channels.
- **1-8 D, 1-4 A** – Assigns Digital inputs 1-8 to the first 8 channels and Analog inputs 1-4 to the last 4 channels.

ZaxNet Setup page

Page purpose: Enables the use of ZaxNet and sets a few operating parameters.

How to get here:

- (***MENU*** *key* → ***Setup*** *button* → ***ZaxNet*** *button*)

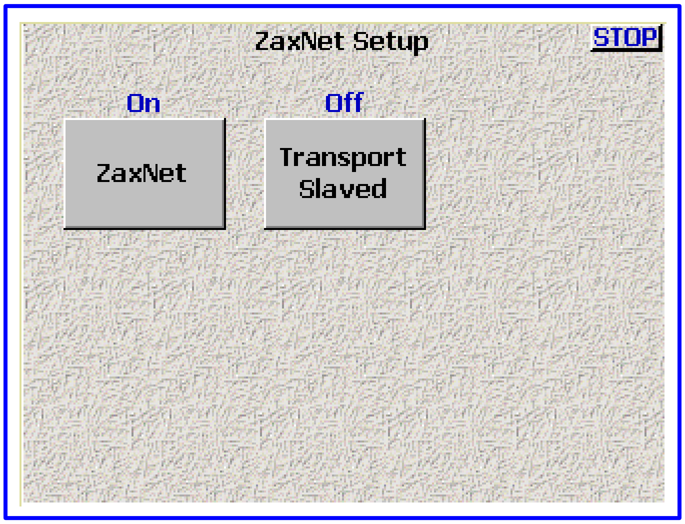


Figure 3-37 ZaxNet Setup page

Page Notes

None

Page Level Shortcuts

None

ZaxNet Enable button

When set to **On**, tells the Deva software to enable ZaxNet functionality and to start communicating with it. Default setting: **Off**

Transport Slaved button

When set to **On**, the appropriate Start / Stop Record commands are sent on ZaxNet to control each transmitter's recorder in sync with the Deva starting and stopping recording. Default setting: **Off**

NOTE: Having the ***Transport Slaved*** *button* turned **ON** precludes the possibility of recording Talent when they are not in a Take.

IMPORTANT: In order for this button to function, it is necessary to also have the ***ZaxNet Enable*** *button* set to **On**.

Power Roll button

Deva or Fusion can now send Power Roll state info through its timecode output via an attached IFB100 or QRX-IFB. The Deva's setting of the **POWER ROLL** parameter has the following effects:

- **Always High** – send a HIGH POWER state at all times.
- **Always Low** – send a LOW POWER state at all times.
- **Power Roll** – send a LOW POWER state while in STOP mode and a HIGH POWER state while in RECORD or PLAYBACK mode.

For additional information, see ***Power Roll feature*** {**p.157**}.

User Interface Settings page

Page purpose: This page allows you to configure some of the Deva's operations.

How to get here:

- (***MENU*** *key* → ***Setup*** *button* → ***User Interface*** *button*)

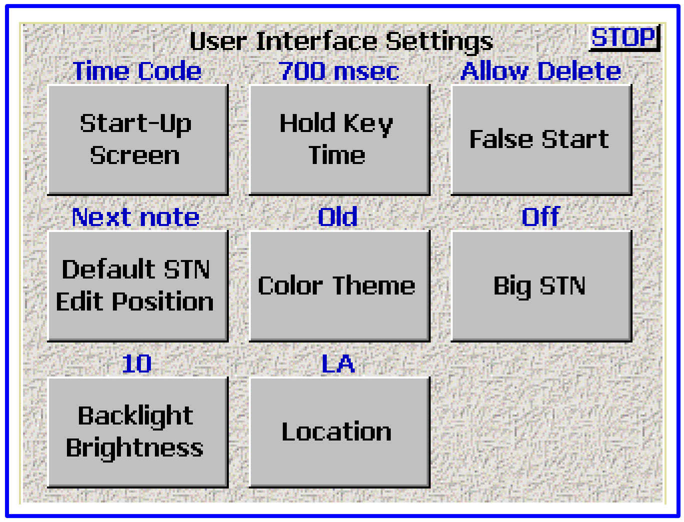


Figure 3-38 User Interface Settings page

Page Notes

None

Page Level Shortcuts

None

Start-Up Screen button

Allows you to select the first page you see after the Deva has completed the initialization process:

- **Home Screen** – See: ***Home page*** {**p.35**}
- **Cue Screen** – See: ***Cue Mode page*** {**p.127**}
- **Main Menu** – See: ***Main Menu page*** {**p.40**}
- **My Deva** – See: ***My Deva page*** {**p.112**}
- **Time Code** – See: ***Timecode page*** {**p.57**}

Hold Key Time button

Allows you to set the amount of delay before the Deva keys repeat a character. Available values are: **Off**, **100 msec**, **200 msec**, **300 msec**, **400 msec**, **500 msec**, **600 msec**, **700 msec**, **800 msec**, **900 msec**, **1 secs**, **2 secs**. If Off is selected, each individual key press will result in only action being taken, irrespective of the time the button is pressed. Default setting: **250 msec**

NOTE: Pressing and holding the ***MENU*** *key* when in any page eventually takes you back to the ***Home page*** {**p.35**}. When setting this button, press and hold the ***MENU*** *key* to evaluate the setting.

False Start button

- **Allow Delete** – Displays the ***Delete it*** *button* on the False Start dialog.
- **No delete** – Hides the ***Delete it*** *button* on the False Start dialog.

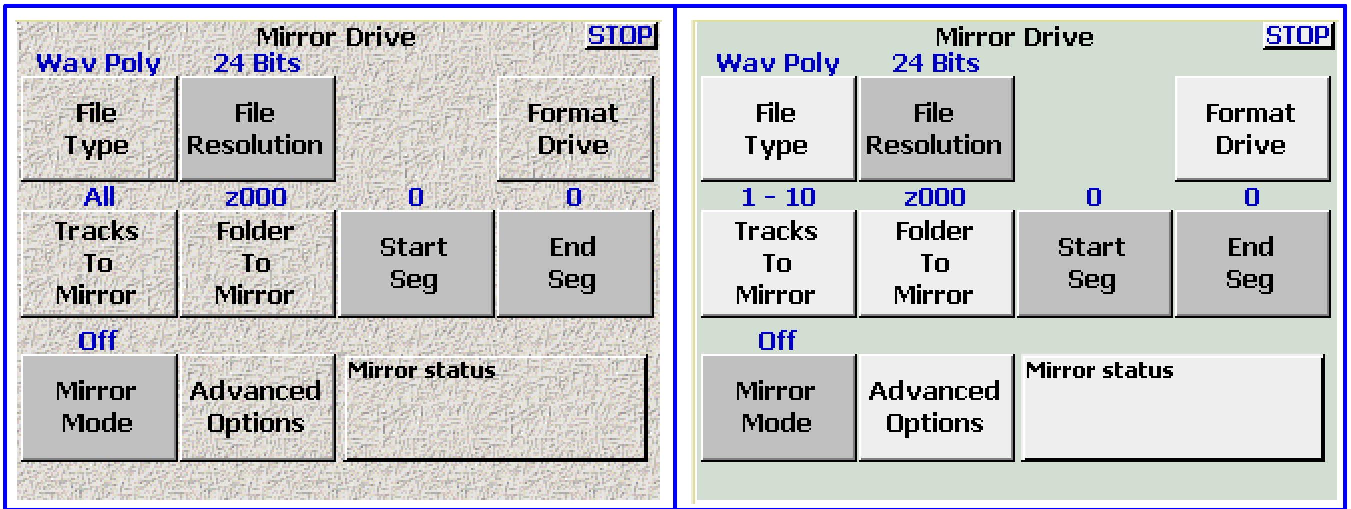
Alters the capability of the ***False Start dialog*** {**p.139**}. The end result is whether or not the operator can, as part of the ***False Start*** *dialog*, delete the false start now or has to take care of it later. It could be that Post wants to receive all false starts. If so, selecting **No delete** aids you in meeting this requirement.

Default STN Edit Position button

- **Current note** – Opens the current audio recording's metadata (i.e. Scene, Take, Note) for editing.
- **Next note** – Opens the metadata that will be used during the next recording.

Color Theme button

Pressing this button toggles between the old and new color themes. The new color theme makes most buttons and some backgrounds have more of a White color to them.



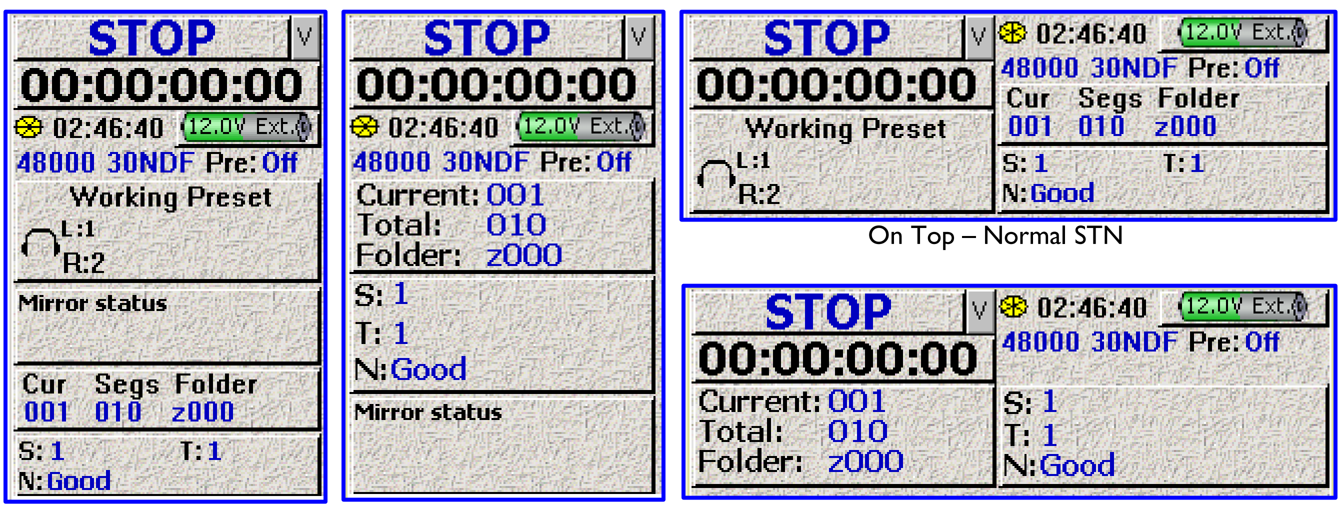
Old New

Figure 3-39 Effects of the Color Theme button

NOTE: You must power cycle your Deva for the color theme change to take effect.

Big STN button

This button only affects the metadata portion of the ***Home page*** {**p.35**}. It toggles between **Off** (Normal STN) and **On** (Big STN). STN stands for Scene, Take and Note. When the Big STN option is enabled, the text of the folder name, current segment number and total number of segments are also enlarged and the ***Headphone*** *button* is removed.



On Left Side – Normal STN On Left Side – Big STN On Top – Big STN

Figure 3-40 Effects of the Big STN button

Backlight Brightness button

It controls the Deva's backlight intensity and cycles between **1** and **10**. In the old LCD module, 1 is darkest and 10 is brightest. In the new high intensity LCD module, 1 is the brightest and 10 is the darkest. Default setting: **10**

Location button

- **USA** – Metadata viewed as Scene, Take, Note
- **Europe** – N/A
- **UK** – Metadata viewed as Slate, Take, Note
- **LA** – N/A

Input Configure page (Analog Inputs selected)

Page purpose: It sets the parameters of the analog inputs. This includes Mic / Line Level, Highpass Filtering, Mic Powering, Gain Trim and Digital Delay.

How to get here:

- (***MENU*** *key* → ***Input Configure*** *button*)

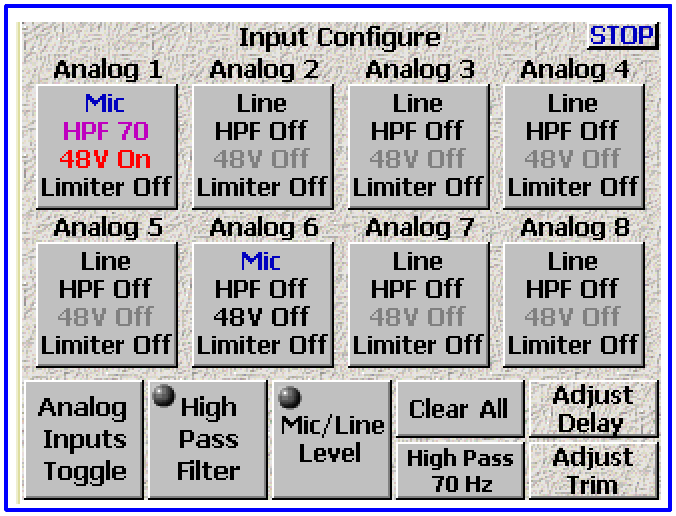


Figure 3-41 Input Configure page (Analog Inputs selected)

Page Notes

None

Page Level Shortcuts

- ***1 – 8*** *keys* – equivalent to pressing the appropriate ***Analog (#)*** *buttons*, changes to the ***Analog Input (#) page*** {**p.89**} for the selected channel.

Analog (#) buttons

Pressing it displays the ***Analog Input (#) page*** {**p.89**}.

Default settings: Line level, HPF Off, 48V Off, Limiter Off

(Analog / Digital / Line Lvl) Inputs Toggle button

Pressing it toggles this page between the ***Input Configure page (Analog Inputs selected)*** {**p.87**}, ***Input Configure page (Digital Inputs selected)*** {**p.98**} and ***Input Configure page (Line Lvl Inputs selected)*** (Deva-16 only) {**p.108**}.

High Pass Filter button

Each analog input can have a highpass filter applied to it. You can enable a highpass filter for both line- and mic-level inputs.

Enabling the Highpass Filter

1. Press the ***High Pass Filter*** *button*.
   The button's LED indicator flashes green while it is active.
2. Set the Highpass Frequency.
   Setting and changing the Highpass Frequency is outlined in the ***High Pass (#) Hz button*** {**p.88**}.
3. Press one of the ***Analog (#)*** *buttons* to apply the highpass filter settings.
   The HPF indicator changes to purple with the highpass frequency indicated.
4. Repeat Step 3 for each channel you want to change.
5. Once the last channel has been changed, press the ***High Pass Filter*** *button* again or the ***ENTER*** *key*.
   The LED stops flashing.

NOTE: You can use a different frequency for each channel, simply repeat steps 2 and 3 for each channel.

Mic/Line Level button

To set the mic / line input gain, press the ***Mic/Line Level*** *button*, then select the individual Input Channels. **MIC** appears in **Blue**. **LINE** appears in **Black**.

Clear All button

This button provides a convenient way to clear all the settings, and resets this page back to the factory default settings.

NOTE: Pressing this button does NOT do anything to the following settings: limiters, trim, delay.

Adjust Delay button

Pressing it displays the ***(Analog / Digital) Input Delay page*** {**p.109**}.

High Pass (#) Hz button

To set the Highpass Frequency, do the following:

1. Press the ***High Pass (#) Hz*** *button*.
   You are prompted to enter the highpass frequency in Hz.
2. Use the numeric keys to enter the frequency.
   The valid range is **30** to **240 Hz**. Default setting: **70 Hz**
   Any value outside this range is placed near the closest valid number within this range.
3. Press ***High Pass (#) Hz*** *button* or the ***ENTER*** *key* to finish entering the Cutoff Frequency.

High Pass (#) Hz button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

Adjust Trim button

Pressing it displays the ***(Analog / Digital) Input Trim page*** {**p.111**}.

Analog Input (#) page

Page purpose: This page maintains several parameters for each analog input channel.

How to get here:

- (***MENU*** *key* → ***Input Configure*** *button* → ***Analog (#)*** *buttons*)

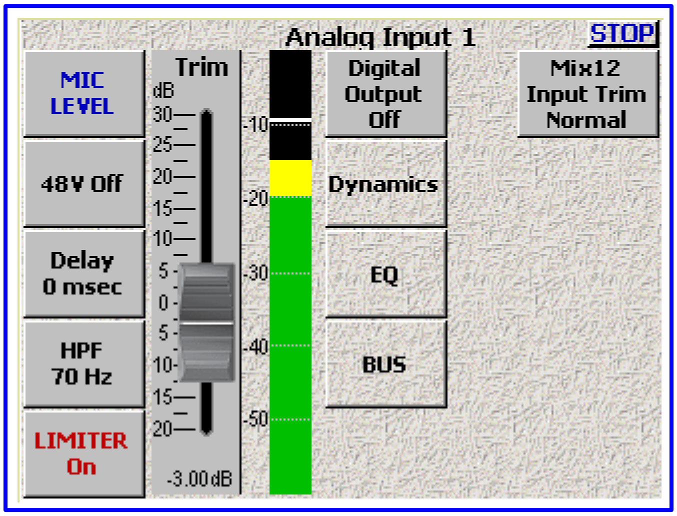


Figure 3-42 Analog Input (#) page

Page Notes

- You have two methods to change each parameter on this page (does not apply to values that toggle):
  - Click on a parameter button and a data entry field appears. Directly enter the value and press the ***ENTER*** *key*.
  - If you enter a value that is out of the valid range, the closest value in range is applied.

Page Level Shortcuts

- ***1*** – ***8*** *keys* – the same as clicking on analog channel buttons 1 – 8.
- ***D*** *key* – goes to the ***Analog Input (#) – Dynamics page*** {**p.91**} for the current channel.
- ***E*** *key* – goes to the ***Analog Input (#) – EQ page*** {**p.94**} for the current channel. This functions the same as the ***EQ*** *key* on the Mix-12.
- ***B*** *key* – goes to the ***Analog Input (#) – BUS page*** {**p.97**} for the current channel. This functions the same as the ***BUS*** *key* on the Mix-12.

(Mic / Line) Level button

Pressing it toggles this channel's level between **LINE LEVEL** and **MIC LEVEL**.

48V (On / Off) button

Phantom power works in cooperation with the mic / line level settings. If you have a channel set to Line-Level, you can't turn **On** that channel's phantom power.

> **NOTE:** If you change a channel from microphone input (Mic) to line input (Line), the phantom power for that channel is turned 'OFF' and the **48V On** *button* is changed to **48V Off**.

Setting Phantom Power

To turn 'ON' 48V phantom power, select the ***48V (On / Off)*** *button*. When phantom power is enabled, **48V Off** changes to **48V On**.

Delay button

Press it to enter a value for the duration of this input's delay.

- Unit = **msec** – (Valid range: **0** – **40**, Value step: 1)
- Unit = **samples** – (Valid range: **0** – **1920**, Value step: 1)

Delay button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

HPF button

Press it to enter a value for the cutoff frequency for this input's high-pass filter.

- **Off**
- (Valid range: **30 – 240 Hz**, Value step: 1)

HPF button Shortcuts

See: *Common Data Entry Field Shortcuts List* {**p.159**}

Limiter (On / Off) button

Pressing it toggles the limiter for this channel **On** or **Off**. This limiter's settings cannot be adjusted.

Trimmer graphic fader

Adjusting it sets the pre-amp level for this channel to optimize this channel's performance. If you look at the bottom of the fader background, you'll see the numeric representation of the slider's position, within 0.25 dB. This makes it easy to repeat a setting, if necessary. (Valid range: **-20** – **0** – **+30 dB**, Value step: 0.25)

> **NOTE:** The scale is **NOT** dBFS and it is **NOT** dBu. It is a purely relative comparison to the input value arriving at the fader.

Level meter

It displays the current audio level for this channel. The view point for this meter is post trimmer and pre-fader. The scale is dBFS.

Digital Output button

Pressing it enables (**On**) / disables (**Off**) the digital output for this channel.

Dynamics button

Pressing it displays the *Analog Input (#) – Dynamics page* {**p.91**}.

EQ button

Pressing it displays the *Analog Input (#) – EQ page* {**p.94**}.

> **NOTE:** Unlike the Fusion-10, the Effects Package is included in both the Deva-5.8 and Deva-16.

BUS button

Pressing it displays the *Analog Input (#) – BUS page* {**p.97**}.

Mix12 Input Trim Select button

- **Normal** – Indicates any changes made to this channel's Mix-12 ***Input Trim*** *knob* will adjust the Deva's preamp for this channel.
- **Tx ZaxNet** – Indicates any changes made to this channel's Mix-12 ***Input Trim*** *knob* will send a ZaxNet command to adjust this channel's transmitter preamp.

Analog Input (#) – Dynamics page

Page purpose: Requires **EFFECTS PACKAGE** – This page maintains the compressor for each analog input channel.

How to get here:

- (***MENU*** *key* → ***Input Configure*** *button* → ***Analog (#)*** *buttons* → ***Dynamics*** *button*)

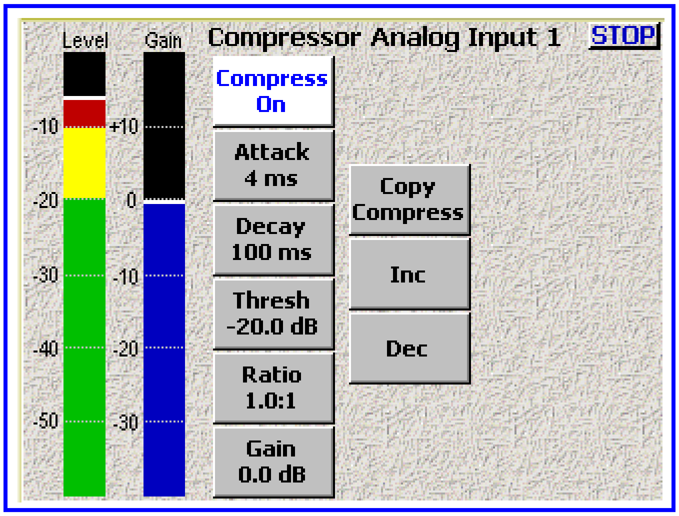


Figure 3-43 Analog Input (#) - Dynamics page

Page Notes

- You have two methods to change each parameter on this page:
  - Click on a parameter, it turns White. The ***Inc*** *button* or ***Dec*** *button* pick up a parameter title. Pressing either button will adjust the parameter in its respective direction.
  - Click on a parameter, it turns White. Click on the now White button and a data entry field appears. Directly enter the value and press the ***ENTER*** *key*.
- If you enter a value that is out of the valid range, the closest value in range is applied.

Page Level Shortcuts

- ***ENTER*** *key* – toggles the compressor on / off
- ***UP or DOWN ARROW*** *key* (keyboard) – cycles through the compressor buttons.
- ***2 or 8*** *key* (front panel) – cycles through the compressor buttons.

Level meter

It displays the current audio level for this channel. The scale is dBFS.

Gain meter

It displays the total gain on the channel including make-up gain. The scale is dB.

Compress (On / Off) button

Pressing it enables (**On**) / disables (**Off**) the compressor for this channel. When this button is highlighted, pressing the ***ENTER*** *key* toggles the setting.

Attack button

(Attack Speed) It controls the amount of gain slewing which will generally slow the response to attack transients only. (Valid range: **1** – **4** – **100 ms**, Value step: 1)

Attack button Shortcuts

Clicking the button the first time selects it. This allows the value to be modified by the ***Inc*** *button* or ***Dec*** *button*.

Clicking it a second time opens it for direct access.
See: *Common Data Entry Field Shortcuts List* {**p.159**}

Decay button

(Decay Speed) It controls the decay speed of the peak detector used by the dynamics processing. (Valid range: **50** – **100** – **1000 ms**, Value step: 1)

Decay button Shortcuts

Clicking the button the first time selects it. This allows the value to be modified by the ***Inc*** *button* or ***Dec*** *button*.

Clicking it a second time opens it for direct access.
See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

Thresh button

(Compressor Threshold) It sets the threshold above which gain reduction occurs according to the Compressor Ratio setting. (Valid range: **-60.0** – **-20.0** – **0.0 dB**, Value step: 0.1)

Thresh button Shortcuts

Clicking the button the first time selects it. This allows the value to be modified by the ***Inc*** *button* or ***Dec*** *button*.

Clicking it a second time opens it for direct access.
See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exception(s):

- ***BACKSPACE*** *key* –
  1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Ratio button

(Compressor Ratio) It sets the compressor ratio, i.e. 4.0:1 means for every 1 dB above the Compressor Threshold the gain will be reduced 4 dB. (Valid range: **1.0:1** – **20.0:1**, Value step: 0.1)

Ratio button Shortcuts

Clicking the button the first time selects it. This allows the value to be modified by the ***Inc*** *button* or ***Dec*** *button*.

Clicking it a second time opens it for direct access.
See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

Gain button

(Make up Gain Setting) It is used to compensate for the gain reduction caused by the action of the compressor. (Valid range: **0.0** – **30.0 dB**, Value step: 0.1)

Gain button Shortcuts

Clicking the button the first time selects it. This allows the value to be modified by the ***Inc*** *button* or ***Dec*** *button*.

Clicking it a second time opens it for direct access.
See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exception(s):

- ***BACKSPACE*** *key* –
  1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Copy Compress button

This is used to save you time and copy all compressor settings to the current channel from another specified channel. To copy the settings from one compressor to another, perform the following:

1. Go to the channel you want to copy the settings to.
2. Press the ***Copy Compress*** *button*. (A data entry field is displayed.)
3. Using the keypad, enter the channel that you want to copy the compression settings from and press the ***ENTER*** *key*. (The settings are copied and the page is updated.)
4. Repeat 1 – 3 for each additional channel you want to copy settings to.

Inc button

Pressing it increments the selected parameter by its step value.

Dec button

Pressing it decrements the selected parameter by its step value.

Analog Input (#) – EQ page

Page purpose: Requires **EFFECTS PACKAGE** – This page maintains the EQ settings for each analog input channel.

How to get here:

- (***MENU*** *key* → ***Input Configure*** *button* → ***Analog (#)*** *buttons* → ***EQ*** *button*)

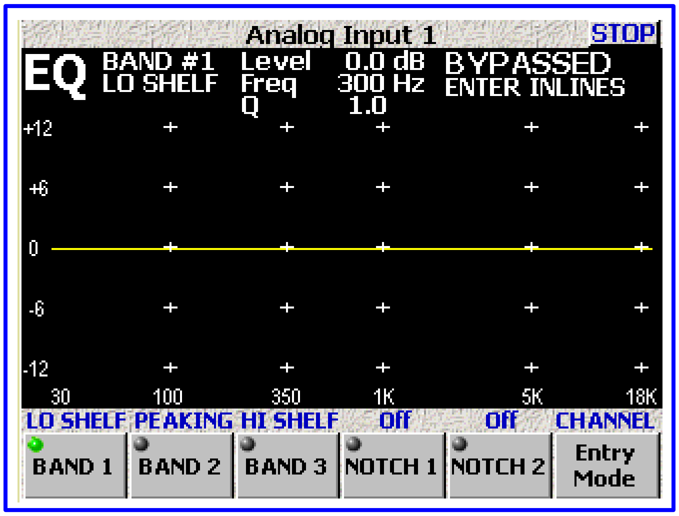


Figure 3-44 Analog Input (#) - EQ page

Page Notes

- While in this page with the ***Entry Mode*** *button* set to **CHANNEL**, pressing a number (1 – 8) causes the appropriate Analog channel EQ to be displayed.
- Once all of the parameters for an input have been entered, press the ***ENTER*** *key*. The status indicator (upper right corner), changes to **INLINE**, meaning that it is now active. If you press ***ENTER*** once again, the status indicator changes back to **BYPASSED**, meaning that it is now inactive.
- Default settings:
  - Band #1 – Type: **Lo Shelf**, Level: **0.0 dB**, Freq: **300 Hz**, Q: **1.0**
  - Band #2 – Type: **Peaking**, Level: **0.0 dB**, Freq: **2000 Hz**, Q: **1.0**
  - Band #3 – Type: **Hi Shelf**, Level: **0.0 dB**, Freq: **5000 Hz**, Q: **1.0**
  - Notch #1 – Type: **Off**, Level: **-96.0 dB**, Freq: **60 Hz**, Q: **9.9**
  - Notch #2 – Type: **Off**, Level: **-96.0 dB**, Freq: **120 Hz**, Q: **9.9**

EQ page Level Shortcuts

- ***ENTER*** *key* – alternately enables (inline) and disables (bypassed) ALL EQ settings for the current channel. When a channel's EQ has been bypassed, the settings are still maintained until they are specifically modified.
- ***RIGHT ARROW*** *key* – advances to the next filter band (note the green light in the buttons on the bottom of the page).
- ***LEFT ARROW*** *key* – advances to the previous filter band.
- ***UP ARROW*** *key* – changes the current band's filter type:
  - Band 1 – 3 are band filters selectable as **Lo Shelf**, **Hi Shelf**, **Peaking** or **Off**.
  - Notch 1 & 2 are notch filters selectable as **Off** or **On**.
- ***U*** *key* – resets the ***Level*** *field* of all bands of the current channel to unity (**0.0**), effectively negating them.
- ***L*** *key* – changes focus to the ***Level*** *field*.
- ***F*** *key* – changes focus to the ***Freq*** *field*.
- ***Q*** *key* – changes focus to the ***Q*** *field*.
- ***E*** *key* – advances to the ***EQ Memory*** *view*.
- ***R*** *key* – resets the ***Level*** *field*, ***Freq*** *field* and ***Q*** *field*.
- ***BACKSPACE*** *key* – advances to the ***EQ Memory*** *view*.

While the ***Entry Mode*** *button* is set to **LVL/FREQ**, the following keys are active:

- ***2*** *key* – adds 0.4 to the ***Level*** *field*.
- ***8*** *key* – subtracts 0.4 from the ***Level*** *field*.
- ***6*** *key* – adds 200 to the ***Freq*** *field*.
- ***4*** *key* – subtracts 200 from the ***Freq*** *field*.

EQ Memory view Shortcuts

- ***1*** – ***5*** *keys* – pressing one of them loads / saves (depending on the mode) the respective memory.
- ***E*** *key* – exits the **EQ** *page* and returns to the ***Analog Input (#) page*** {**p.89**} for this channel.
- ***BACKSPACE*** *key* – returns to the **EQ** *page*.

(Band / Notch) (#) field

It indicates which band / notch of the current equalization filter is currently being displayed

Level field

Pressing it establishes / stores the level used by the associated band.
(Valid range: **-24.0** – **+24.0 dB**, Value step: 0.1)

Level field Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exception(s):

- ***BACKSPACE*** *key* –
  1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

(BYPASSED / INLINE) flag

Pressing the ***ENTER*** *key* alternately enables (**INLINE**) / disables (**BYPASSED**) the current input's EQ processing.

Band Type flag

It displays the current band's type, as selected by the ***Band (#)*** *buttons* or ***Notch (#)*** *buttons*.

Freq field

Pressing it establishes / stores the frequency used by the associated band.
(Valid range: **30** – **20000 Hz**, Value step: 1)

Freq field Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

Q field

Pressing it establishes / stores the Q factor used by the associated band.
(Valid range: **0.5** – **9.9**, Value step: 0.1)

Q field Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exception(s):

- ***BACKSPACE*** *key* –
  1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Equalization graph

It displays, in graphic format while INLINE, the result of all components of the associated equalization filter.

Band (#) buttons

Pressing it cycles through the type of band to be applied to that band:

- **Off** – turns off the current band
- **LO SHELF** – sets the current band to a Low Shelf filter
- **HI SHELF** – sets the current band to a High Shelf filter
- **PEAKING** – sets the current band to a Peaking filter.

Notch (#) buttons

Pressing it toggles the notch filter **On** or **Off**.

Entry Mode button

Pressing it cycles through the following list to select which element of the band / notch is to be modified:

- **CHANNEL** – causes the appropriate EQ channel to be displayed.
- **LVL/FREQ** – the following keys are active:
  - ***2*** *key* – adds **0.4** to the ***Level*** *field*.
  - ***8*** *key* – subtracts **0.4** from the ***Level*** *field*.
  - ***6*** *key* – adds a variable step to the ***Freq*** *field*, depending on where in the value range and how long the key is held.
  - ***4*** *key* – subtracts a variable step from the ***Freq*** *field*, depending on where in the value range and how long the key is held.
- **LVL** – causes changes to be applied to the ***Level*** *field*.
- **FREQ** – causes changes to be applied to the ***Freq*** *field*.
- **Q** – causes changes to be applied to the ***Q*** *field*.

Analog Input (#) – BUS page

Page purpose: This page maintains the BUS settings for each analog recording track.

How to get here:

- (***MENU*** *key* → ***Input Configure*** *button* → ***Analog (#)*** *buttons* → ***BUS*** *button*)

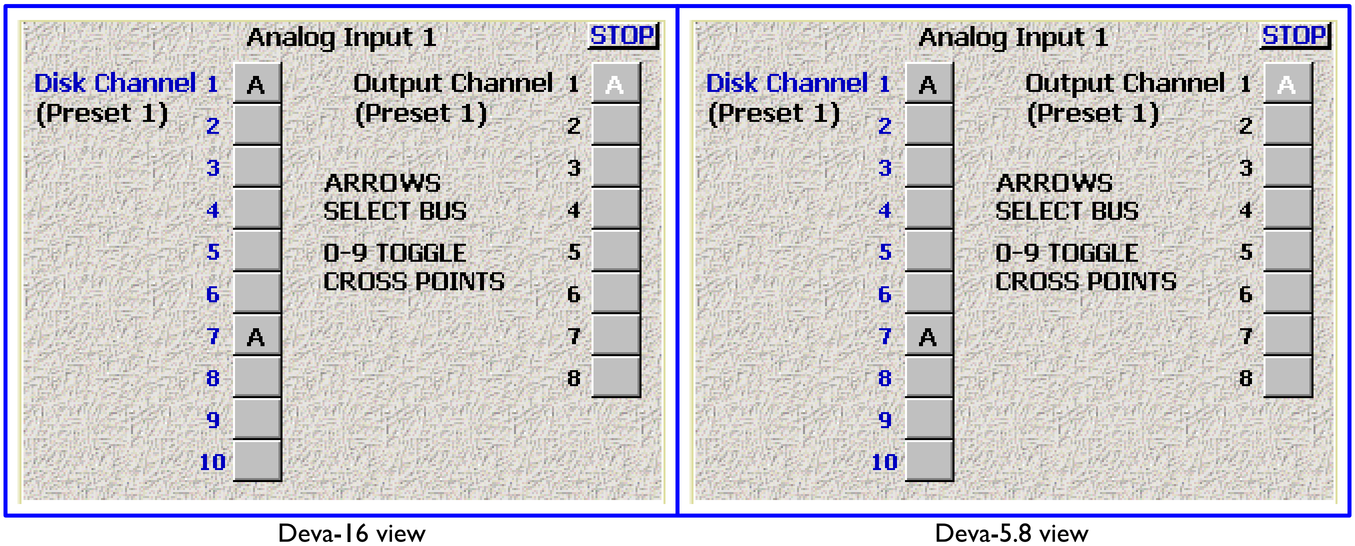


Figure 3-45 Analog Input (#) - BUS page

Page Notes

- The indicator's meaning:

Indicator	*Description*
Black **A**	Analog input post-fader
Black **A** with Line	Analog input post-fader with signal phase inverted
White **A**	Analog input pre-fader
White **A** with Line	Analog input pre-fader with signal phase inverted

Table 3-6 Indicator Descriptions

Page Level Shortcuts

- ***LEFT / RIGHT ARROW*** *keys* – select which bus (Disk Channel vs. Output Channel)
- ***1*** – ***9*** and ***0*** *keys* – cycles cross-points
- ***E*** *key* – exits the ***BUS*** *page* and returns to the ***Analog Input (#) page*** {**p.89**} for this channel
- ***B*** *key* – cycles through the ***Output Channel # page***, ***Analog Input (#) page*** {**p.89**} and this page.

Disk Channel (#) buttons

Pressing each button assigns the associated input to one or more of the recorder's tracks.

Output Channel (#) buttons

Pressing each button assigns the associated input directly to one or more of the output channels.

Input Configure page (Digital Inputs selected)

Page purpose: This page maintains the parameters for the digital inputs. This includes Highpass Filtering, Gain Trim and Digital Delay.

How to get here:

- (***MENU*** *key* → ***Input Configure*** *button* → ***Analog Inputs Toggle*** *button* {=*Digital*})

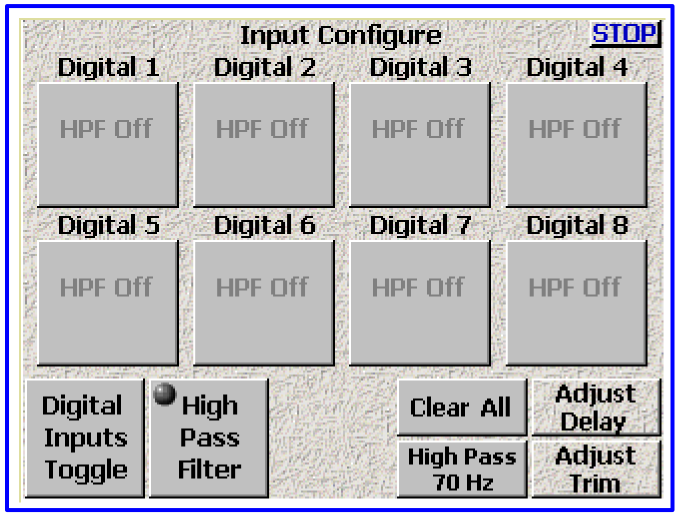


Figure 3-46 Input Configure page (Digital Inputs selected)

Page Notes

None

Page Level Shortcuts

- ***1*** – ***8*** *keys* – equivalent to pressing one of the ***Digital (#)*** *buttons*, changes to the ***Analog Input (#) page*** {**p.89**} for the selected channel.

Digital (#) buttons

Pressing it displays the ***Digital Input (#) page*** {**p.100**}. Default settings: HPF Off

(Analog / Digital / Line Lvl) Inputs Toggle button

Pressing it toggles this page between the ***Input Configure page (Analog Inputs selected)*** {**p.87**}, ***Input Configure page (Digital Inputs selected)*** {**p.98**} and ***Input Configure page (Line Lvl Inputs selected)*** (Deva-16 only) {**p.108**}.

High Pass Filter button

Each digital input can have a highpass filter applied to it.

Enabling the Highpass Filter

1. Press the ***High Pass Filter*** *button*
   The button's LED indicator flashes green when pressed.
2. Set the Highpass Frequency.
   Setting and changing the Highpass Frequency is outlined in the ***High Pass (#) Hz button*** {**p.99**}.
3. Press one of the ***Digital (#)*** *buttons* to apply the highpass filter settings.
   The HPF indicator changes to purple with the highpass frequency indicated.
4. Repeat Step 3 for all channels, to enable the highpass filter.
5. Once the last channel has been changed, press the ***High Pass Filter*** *button* again or the ***ENTER*** *key*.
   The LED stops flashing.

NOTE: You can use a different frequency for each channel, simply repeat steps 2 and 3 for each channel.

Clear All button

Pressing this button provides a convenient way to clear all the settings, and resets this page back to the factory default settings.

NOTE: Pressing this button does NOT do anything to the following settings: limiters, trim, delay.

Adjust Delay button

Pressing it displays the ***(Analog / Digital) Input Delay page*** {**p.109**}.

High Pass (#) Hz button

To set the Highpass Frequency, perform the following:

1. Press the ***High Pass (#) Hz*** *button*
   You are prompted to enter the highpass frequency in Hz.
2. Use the numeric keys to enter the frequency.
   The valid range is **30** – **70** – **240 Hz**.
3. Press ***High Pass (#) Hz*** *button*
   This sets the frequency.

High Pass button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

Adjust Trim button

Pressing it displays the ***(Analog / Digital) Input Trim page*** {**p.111**}.

Digital Input (#) page

Page purpose: This page maintains several parameters for each digital input channel.

How to get here:

- (*MENU* key → *Input Configure* button → *Analog Inputs Toggle* button {=Digital} → *Digital (#)* buttons)

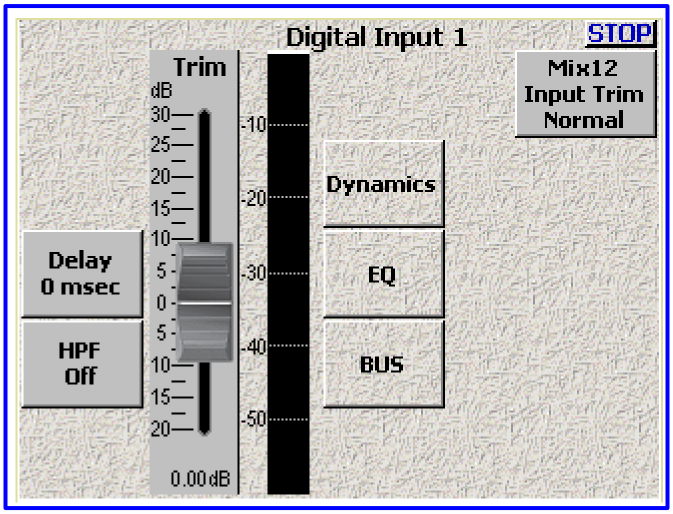


Figure 3-47 Digital Input (#) page

Page Notes

None

Page Level Shortcuts

- *1 – 8 keys* – the same as clicking on analog channel buttons 1 – 8.
- *D key* – goes to the *Digital Input (#) – Dynamics page* {**p.102**} for the current channel.
- *E key* – goes to the *Digital Input (#) – EQ page* {**p.104**} for the current channel. This functions the same as the *EQ key* on the Mix-12.
- *B key* – goes to the *Digital Input (#) – BUS page* {**p.107**} for the current channel. This functions the same as the *BUS key* on the Mix-12.

Delay button

Press it to enter a value for the duration of this input's delay.
(Valid range: **0** – **40 ms**, Value step: 1)

Delay button Shortcuts

See: *Common Data Entry Field Shortcuts List* {**p.159**}

HPF button

Press it to enter a value for the cutoff frequency for this input's high-pass filter.

- **Off**
- (Valid range: **30** – **240 Hz**, Value step: 1)

HPF button Shortcuts

See: *Common Data Entry Field Shortcuts List* {**p.159**}

Trimmer graphic fader

It sets the pre-amp level for this channel to optimize this channel's performance. If you look at the bottom of the fader background, you'll see the numeric representation of the slider's position, within 0.25 dB. This makes it easy to repeat a setting, if necessary. (Valid range: **-20** – **0** – **+30 dB**, Value step: 0.25)

NOTE: The scale is **NOT** dBFS and it is **NOT** dBu. It is a purely relative comparison to the input value arriving at the fader.

Level meter

It displays the current audio level for this channel. The view point for this meter is post trimmer and pre-fader. The scale is dBFS.

Dynamics button

Pressing it displays the ***Digital Input (#) – Dynamics page*** {**p.102**}.

EQ button

Pressing it displays the ***Digital Input (#) – EQ page*** {**p.104**}.

NOTE: Unlike the Fusion-10, the Effects Package is included in both the Dva-5.8 and Deva-16.

BUS button

Pressing it displays the ***Digital Input (#) – BUS page*** {**p.107**}.

Mix12 Input Trim Select button

- **Normal** – Indicates any changes made to this channel's Mix-12 ***Input Trim*** *knob* will affect Zaxcom's preamp for this channel.
- **Tx ZaxNet** – Indicates any changes made to this channel's Mix-12 ***Input Trim*** *knob* will send a ZaxNet command to adjust this channel's transmitter pre-amp.

Digital Input (#) – Dynamics page

Page purpose: Requires **EFFECTS PACKAGE** – This page maintains the compressor for each digital input channel.

How to get here:

- (***MENU*** *key* → ***Input Configure*** *button* → ***Analog Inputs Toggle*** *button* {=*Digital*} → ***Digital (#)*** *buttons* → ***Dynamics*** *button*)

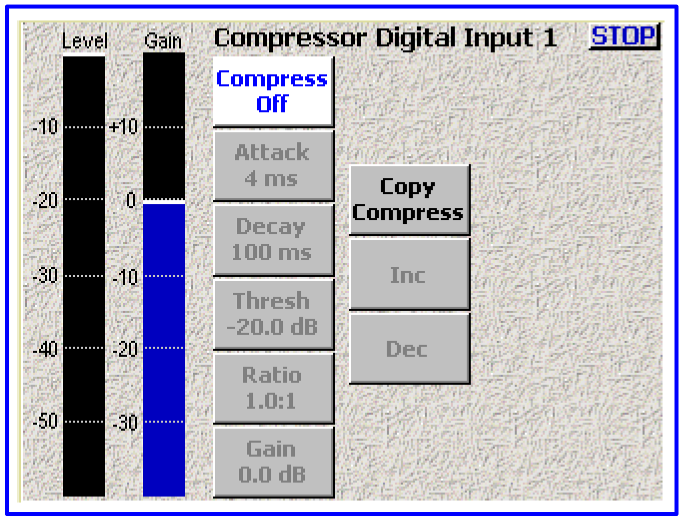


Figure 3-48 Digital Input (#) - Dynamics page

Page Notes

- You have two methods to change each parameter on this page:
  - Click on a parameter, it turns White. The ***Inc*** *button* or ***Dec*** *button* pick up a parameter title. Pressing either button will adjust the parameter in its respective direction.
  - Click on a parameter, it turns White. Click on the now White button and a data entry field appears. Directly enter the value and press the ***ENTER*** *key*.

Page Level Shortcuts

- ***ENTER*** *key* – toggles the compressor on / off
- ***UP or DOWN ARROW*** *key* (keyboard) – cycles through the compressor buttons.
- ***2 or 8*** *key* (front panel) – cycles through the compressor buttons.

Level meter

It displays the current audio level for this channel. The scale is dBFS.

Gain meter

It displays the total gain on the channel including make-up gain. The scale is dB.

Compress (On / Off) button

Pressing it enables (**On**) / disables (**Off**) the compressor for this channel. When this button is highlighted, pressing the ***ENTER*** *key* toggles the setting.

Attack button

(Attack Speed) It controls the amount of gain slewing which will generally slow the response to attack transients only. (Valid range: **1** – **4** – **100 ms**, Value step: 1)

Attack button Shortcuts

Clicking the button the first time selects it. This allows the value to be modified by the ***Inc*** *button* or ***Dec*** *button*.

Clicking it a second time opens it for direct access.
See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

Decay button

(Decay Speed) It controls the decay speed of the peak detector used by the dynamics processing.
(Valid range: **50** – **100** – **1000 ms**, Value step: 1)

Decay button Shortcuts

Clicking the button the first time selects it. This allows the value to be modified by the ***Inc*** *button* or ***Dec*** *button*.

Clicking it a second time opens it for direct access.
See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

Thresh button

(Compressor Threshold) It sets the threshold above which gain reduction occurs according to the Compressor Ratio setting. (Valid range: **-60.0** – **-20.0** – **0.0 dB**, Value step: 0.1)

Thresh button Shortcuts

Clicking the button the first time selects it. This allows the value to be modified by the ***Inc*** *button* or ***Dec*** *button*.

Clicking it a second time opens it for direct access.
See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exception(s):

- ***BACKSPACE*** *key* –
  1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Ratio button

(Compressor Ratio) It sets the compressor ratio, i.e. 4.0:1 means for every 1 dB above the Compressor Threshold the gain will be reduced 4 dB. (Valid range: **1.0:1** – **20.0:1**, Value step: 0.1)

Ratio button Shortcuts

Clicking the button the first time selects it. This allows the value to be modified by the ***Inc*** *button* or ***Dec*** *button*.

Clicking it a second time opens it for direct access.
See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

Gain button

(Make up Gain Setting) It is used to compensate for the gain reduction caused by the action of the compressor. (Valid range: **0.0** – **20.0 dB**, Value step: 0.1)

Gain button Shortcuts

Clicking the button the first time selects it. This allows the value to be modified by the ***Inc*** *button* or ***Dec*** *button*.

Clicking it a second time opens it for direct access.
See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exception(s):

- ***BACKSPACE*** *key* –
  1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Copy Compress button

It is used to save you time and copy all compressor values to the current channel from another specified channel. To copy the settings from one compressor to another, perform the following:

1. Go to the channel you want to copy the settings to.
2. Press the ***Copy Compress*** *button*. (A data entry field is displayed.)
3. Using the keypad, enter the channel that you want to copy the compression settings from and press the ***ENTER*** *key*. (The settings are copied and the page is updated.)
4. Repeat 1 – 3 for each additional channel you want to copy settings to.

Inc button

Pressing it increments the selected parameter by its step value.

Dec button

Pressing it decrements the selected parameter by its step value.

Digital Input (#) – EQ page

Page purpose: Requires **EFFECTS PACKAGE** – This page maintains the EQ settings for each digital input channel.

How to get here:

- (***MENU*** *key* → ***Input Configure*** *button* → ***Analog Inputs Toggle*** *button* {=*Digital*} → ***Digital (#)*** *buttons* → ***EQ*** *button*)

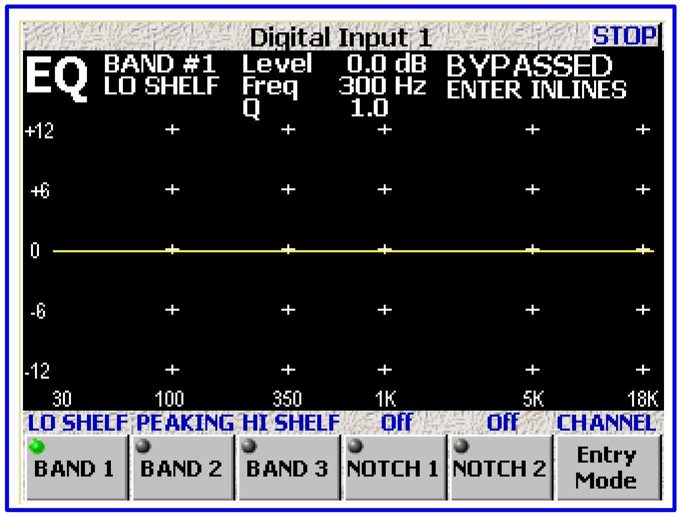


Figure 3-49 Digital Input (#) - EQ page

Page Notes

- While in this page with the ***Entry Mode*** *button* set to **CHANNEL**, pressing a number (1 – 8) causes the appropriate Analog channel EQ to be displayed.
- Once the parameters for an input have been entered, press the ***ENTER*** *key*. The status indicator (upper right corner), changes to **INLINE**, meaning that it is now active. If you press ***ENTER*** once again, the status indicator changes back to **BYPASSED**, meaning that it is now inactive.
- Default settings:
  - Band #1 – Type: **Lo Shelf**, Level: **0.0 dB**, Freq: **300 Hz**, Q: **1.0**
  - Band #2 – Type: **Peaking**, Level: **0.0 dB**, Freq: **2000 Hz**, Q: **1.0**
  - Band #3 – Type: **Hi Shelf**, Level: **0.0 dB**, Freq: **5000 Hz**, Q: **1.0**
  - Notch #1 – Type: **Off**, Level: **-96.0 dB**, Freq: **60 Hz**, Q: **9.9**
  - Notch #2 – Type: **Off**, Level: **-96.0 dB**, Freq: **120 Hz**, Q: **9.9**

EQ page Level Shortcuts

- ***ENTER*** *key* – alternately enables (inline) and disables (bypassed) ALL EQ settings for the current channel. When a channel's EQ has been bypassed, the settings are still maintained until they are specifically modified.
- ***RIGHT ARROW*** *key* – advances to the next filter band (note the green light in the buttons on the bottom of the page).
- ***LEFT ARROW*** *key* – moves to the previous filter band.
- ***UP ARROW*** *key* – changes the current band's filter type:
  - Band 1 – 3 are band filters selectable as **Lo Shelf**, **Hi Shelf**, **Peaking** or **Off**.
  - Notch 1 & 2 are notch filters selectable as **Off** or **On**.
- ***U*** *key* – resets the ***Level*** *field* of all bands of the current channel to unity (**0.0**), effectively negating them.
- ***L*** *key* – changes focus to the ***Level*** *field*.
- ***F*** *key* – changes focus to the ***Freq*** *field*.
- ***Q*** *key* – changes focus to the ***Q*** *field*.
- ***E*** *key* – advances to the ***EQ Memory*** *view*.
- ***R*** *key* – resets the ***Level*** *field*, ***Freq*** *field* and ***Q*** *field*.
- ***BACKSPACE*** *key* – advances to the ***EQ Memory*** *view*.

While the ***Entry Mode*** *button* is set to **LVL/FREQ**, the following keys are active:

- ***2*** *key* – adds 0.4 to the ***Level*** *field*.
- ***8*** *key* – subtracts 0.4 from the ***Level*** *field*.
- ***6*** *key* – adds 200 to the ***Freq*** *field*.
- ***4*** *key* – subtracts 200 from the ***Freq*** *field*.

EQ Memory view Shortcuts

- ***1*** – ***5*** *keys* – loads / saves (depending on the mode) in the respective memory.
- ***E*** *key* – exits the **EQ** *page* and returns to the ***Digital Input (#) page*** {**p.100**} for this channel.
- ***BACKSPACE*** *key* – returns to the **EQ** *page*.

(Band / Notch) (#) field

It indicates which band / notch filter of the current channel is currently being displayed

Level field

Pressing it establishes / stores the level used by the associated band.
(Valid range: **-24.0** – **+24.0 dB**, Value step: **0.1**)

Level field Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exception(s):

- ***BACKSPACE*** *key* –
  1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

(BYPASSED / INLINE) flag

Pressing the ***ENTER*** *key* alternately enables (**INLINE**) / disables (**BYPASSED**) the current input's EQ processing.

Band Type flag

It displays the current band's type, as selected by the ***Band (#)*** *buttons* or ***Notch (#)*** *buttons*.

Freq field

Pressing it establishes / stores the frequency used by the associated band.
(Valid range: **20** – **20000 Hz**, Value step: **1**)

Freq field Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

Q field

Pressing it establishes / stores the Q factor used by the associated band.
(Valid range: **0.5** – **9.9**, Value step: **0.1**)

Q field Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exception(s):

- ***BACKSPACE*** *key* –
  1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Equalization graph

It displays, in graphic format, the result of all equalization components on the channel.

Band (#) buttons

Pressing it cycles through the type of band to be applied to that band:

- **Off** – Turns off the current band
- **LO SHELF** – Sets the current band to a Low Shelf filter

- **HI SHELF** – sets the current band to a High Shelf filter
- **PEAKING** – sets the current band to a Peaking filter.

Notch (#) buttons

Pressing it toggles the notch filter **On** or **Off**.

Entry Mode button

Cycles through the following list to select which element of the band / notch is to be modified:

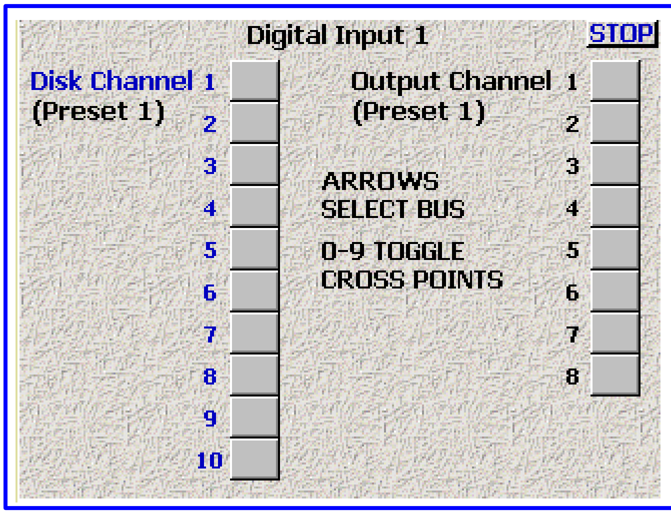
- **CHANNEL** – Causes the appropriate EQ channel to be displayed.
- **LVL/FREQ** – The following keys are active:
  - **2** *key* – adds **0.4** to the ***Level*** *field*.
  - **8** *key* – subtracts **0.4** from the ***Level*** *field*.
  - ***6*** *key* – adds a variable step to the ***Freq*** *field*, depending on where in the value range and how long the key is held.
  - ***4*** *key* – subtracts a variable step from the ***Freq*** *field*, depending on where in the value range and how long the key is held.
- **LVL** – Causes changes to be applied to the ***Level*** *field*.
- **FREQ** – Causes changes to be applied to the ***Freq*** *field*.
- **Q** – Causes changes to be applied to the ***Q*** *field*.

Digital Input (#) – BUS page

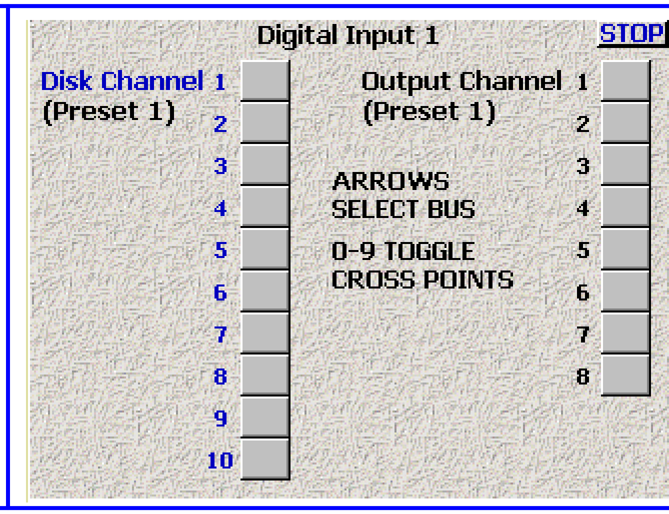
Page purpose: This page maintains the BUS settings for each digital recording track.

How to get here:

- (*MENU key* → *Input Configure button* → *Analog Inputs Toggle button* {=Digital} → *Digital (#) buttons* → *BUS button*)



Deva-16 view



Deva-5.8 view

Figure 3-50 Digital Input (#) - BUS page

Page Notes

- The indicator's meaning:

Indicator	Description
Black **D**	Digital input post-fader
Black **D** with Line	Digital input post-fader with signal phase inverted
White **D**	Digital input pre-fader
White **D** with Line	Digital input pre-fader with signal phase inverted

Table 3-7 Indicator Descriptions

Page Level Shortcuts

- ***LEFT / RIGHT ARROW keys*** – select which bus (Disk Channel vs. Output Channel)
- ***1 – 9*** and ***0*** *keys* – cycles cross-points
- ***E*** *key* – exits the ***BUS*** *page* and returns to the ***Digital Input (#) page*** {**p.100**} for this channel

Disk Channel (#) buttons

They assign the associated input to one or more of the recorder's tracks.

Output Channel (#) buttons

They assign the associated input directly to one or more of the output channels.

Input Configure page (Line Lvl Inputs selected) (Deva-16 only)

Page purpose: It sets the parameters of the line-level inputs.

How to get here:

- (***MENU*** *key* **>** ***Input Configure*** *button* **>** ***Analog Inputs Toggle*** *button* {*=Line Lvl*})

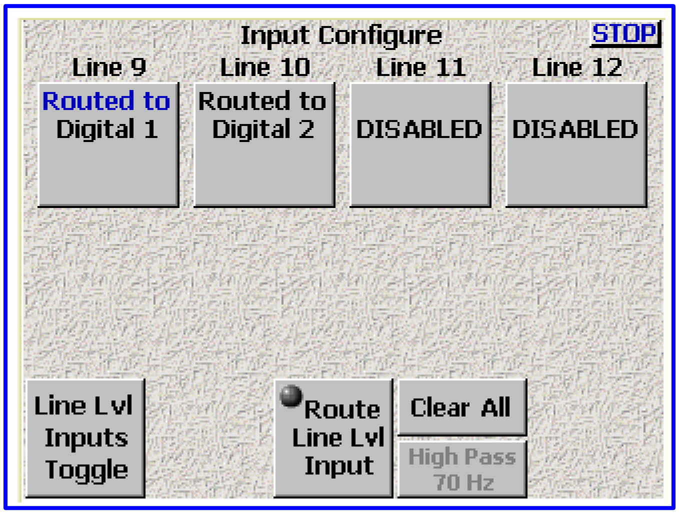


Figure 3-51 Input Configure page (Line Level Inputs selected)

Page Notes

None

Page Level Shortcuts

- ***1*** – ***8*** *keys* – the same as clicking on analog channel buttons 1 – 8.

Line Level Channel buttons

Pressing it re-routes a Line-Level Input to the appropriate Digital Input, but only after the ***Route Line Lvl Input*** *button* has been pressed. Default settings: DISABLED

NOTE: Since pressing this button routes each line-level input to the appropriate digital input, you will need to use the associated digital filtering and effects package for those inputs.

(Analog / Digital / Line Lvl) Inputs Toggle button

Pressing it toggles this page between the ***Input Configure page (Analog Inputs selected)*** {**p.87**}, ***Input Configure page (Digital Inputs selected)*** {**p.98**} and ***Input Configure page (Line Lvl Inputs selected)*** (Deva-16 only) {**p.108**}.

Route Line Lvl Input button

Pressing it allows routing analog line inputs 9 – 12 through the digital inputs 1 – 4.

Clear All button

Pressing it provides a convenient way to clear all the settings, and reset this page back to the factory default settings.

(Analog / Digital) Input Delay page

Page purpose: This page allows you to set a digital delay for any of the analog or digital inputs.

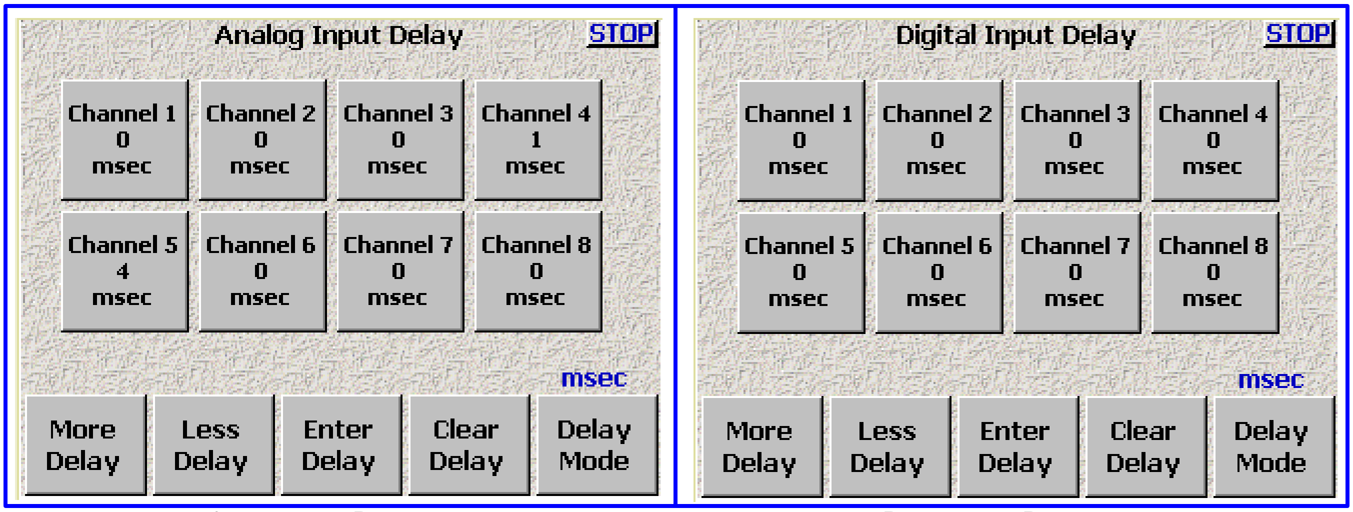
How to get here:

Analog

- (***MENU*** *key* → ***Input Configure*** *button* → ***Adjust Delay*** *button*)

Digital

- (***MENU*** *key* → ***Input Configure*** *button* → ***Analog Inputs Toggle*** *button {=Digital}* → ***Adjust Delay*** *button*)



Analog Input Delay view Digital Input Delay view

Figure 3-52 (Analog / Digital) Input Delay page

Page Notes

None

Page Level Shortcuts

0 – ***9*** *keys* – opens the data entry field for the currently selected (highlighted) button (see ***Enter Delay button Shortcuts***). Type the remainder of the number and press the ***ENTER*** *key*.

Channel (#) buttons

- Unit = **msec** – (Valid range: **0** – **40**, Value step: 1)
- Unit = **samples** – **Valid range** based on **Sampling-rate**

Valid range	Sampling-rate
0 – 1764	44100
0 – 1919	47952
0 – 1920	48000
0 – 1922	48048
0 – 3528	88200
0 – 3840	96000
0 – 3844	96096
0 – 7680	192000

More Delay button

Pressing it increments the selected parameter by its step value.

Less Delay button

Pressing it decrements the selected parameter by its step value.

Enter Delay button

Press it to directly enter the value and press the ***ENTER*** *key*.

Enter Delay button Shortcuts

See: *Common Data Entry Field Shortcuts List* {**p.159**}

Clear Delay button

Pressing it resets all of the channels to zero at one time.

Delay Mode button

Pressing it toggles between **msec** and **samples**.

NOTE: It is not possible to have the channels' delay values in different units (**msec** and **samples**). If you enter a value on one of the buttons and change the unit, the previously entered value(s) will be rounded (up or down) to fit the new unit. So, pick one of the units and stick with it!

Adjusting the Delay

1. Press one of the ***Channel (#)*** *buttons* for the channel you want to adjust.
   The button changes to White indicating it is the selected channel.
2. Press either the ***More Delay*** *button*, ***Less Delay*** *button* or ***Enter Delay*** *button*.
3. Repeat steps 1 & 2 until all channels have been adjusted.

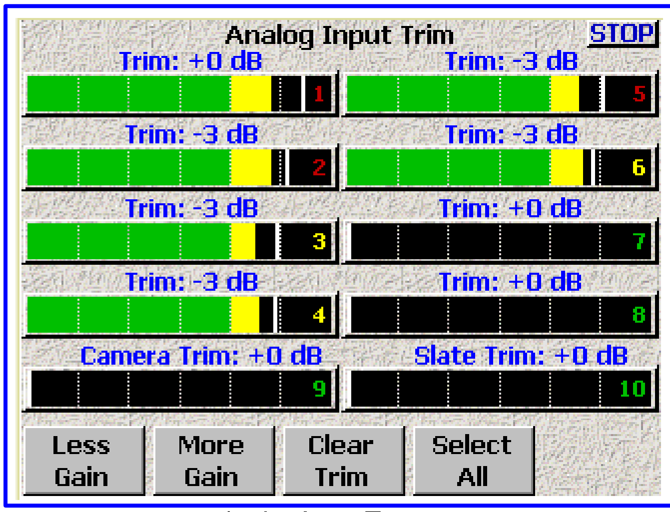
NOTE: When using radio microphones, which have an inherent 0 to 8 ms delay, you can minimize phasing anomalies between digital and analog equipment by adding the appropriate delay to the analog inputs.

(Analog / Digital) Input Trim page

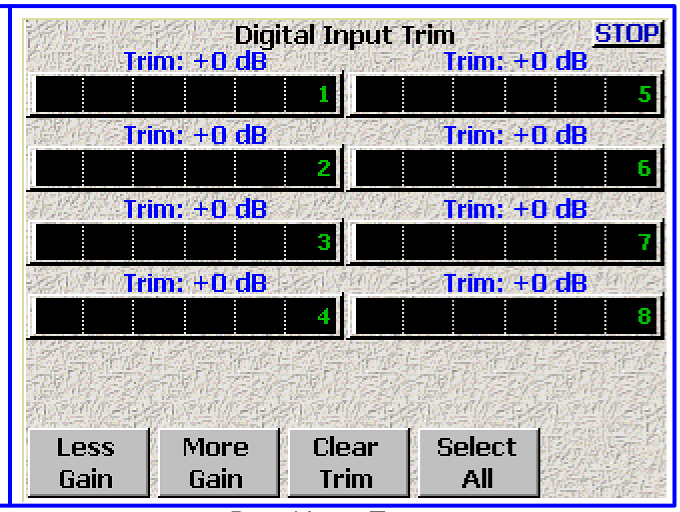
Page purpose: This page allows you to individually adjust the gain on each of the 8 analog inputs and the camera return input.

How to get here:
Analog
- (***MENU*** *key* → ***Input Configure*** *button* → ***Adjust Trim*** *button*)

Digital
- (***MENU*** *key* → ***Input Configure*** *button* → ***Analog Inputs Toggle*** *button* {*=Digital*} → ***Adjust Trim*** *button*)



Analog Input Trim view



Digital Input Trim view

Figure 3-53 (Analog / Digital) Input Trim page

Page Notes
None

Page Level Shortcuts
None

Input (#) Trim fields
It displays the current Trim value and by clicking on it allows you to change the value with the ***More Gain*** *button* or ***Less Gain*** *button*. (Valid range: **-20** – **0** – **+30 dB**, Value step: 1)

Input (#) Level meters
It allows you to see graphically how the signals compare to each other. The scale is in dB.

Less Gain button
Pressing it decrements the selected parameter by its step value.

More Gain button
Pressing it increments the selected parameter by its step value.

Clear Trim button
Pressing it clears all the entered trims.

Select All button
Pressing it selects all of the channels to make changes to all at the same time.

Adjusting the Trim
1. Press one of the ***Input (#) Level*** *meters* for the channel you want to adjust.
   The Trim value for the channel turns **Blue** indicating it is the selected channel.
2. Press either the ***More Gain*** *button* or ***Less Gain*** *button*.
3. Repeat steps 1 & 2 until all channels have been adjusted.

My Deva page

Page purpose: It sets the parameters for all the recording devices, including the Primary Drive, the Backup Drive and any external FireWire device.

How to get here:

- (***MENU*** *key* → ***My Deva*** *button*)

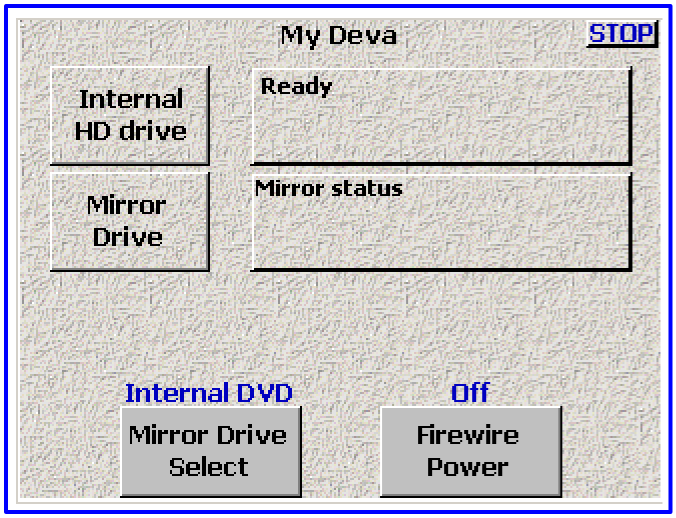


Figure 3-54 My Deva page

Page Notes

- The selections for the CF card drive, Internal DVD or the external FireWire device allows you to set options independent of the Primary Drive settings. You can set different options for all of the drives.
- Mirroring is done simultaneously onto the selected device. Eight tracks can be mirrored to it in real time at 24-bit resolution with a 48 kHz sampling-rate.

Page Level Shortcuts

None

Internal HD drive button

Pressing it displays the ***Internal Disk Utilities page*** {**p.113**}.

Internal HD drive Status button

It displays the current status of the Primary Drive.

Mirror Drive button

Pressing it displays the ***Mirror Drive page*** {**p.120**}.

Mirror Drive Status button

It displays the current status of the Mirror Drive.

Mirror Drive Select button

Pressing it cycles through: **Compact Flash**, **Internal DVD** and **Firewire**.

Firewire Power button

Pressing it toggles between **Off** and **On**.

Internal Disk Utilities page

Page purpose: This page provides options for managing folders and files on the Primary Drive.

How to get here:

- (***MENU*** *key* → ***My Deva*** *button* → ***Internal HD drive*** *button*)

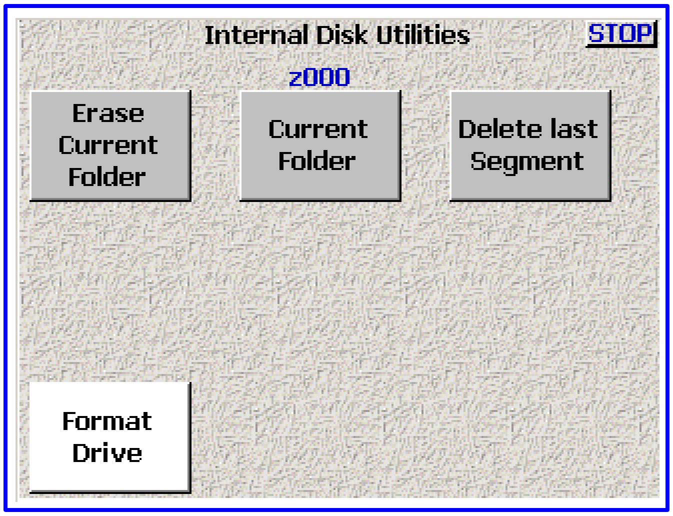


Figure 3-55 Internal Disk Utilities page

Page Notes

None

Page Level Shortcuts

None

Erase Current Folder button

Pressing it erases the currently selected folder. Once you press it, a confirmation dialog box is displayed to prevent accidentally erasing material.

NOTE: Erasing the folder is not the same as deleting the folder. Only the folder's contents are erased. The folder and its name remain. If you are using Sound Roll Numbers, you will need to change the folder's name to the appropriate Sound Roll Number.

Current Folder button

The currently selected folder name is displayed above it

Pressing it displays the ***Disk Folders page*** {**p.114**}.

Delete Last Segment button

Pressing it deletes the last Take in the current folder. Once you press it, a confirmation dialog box is displayed to prevent accidentally deleting material.

Format Drive button

Pressing it displays the ***Format Menu Warning page*** {**p.118**}.

Disk Folders page

Page purpose: Lists all of the folders on the Primary Drive and allows you to manage them.

How to get here:

- (***MENU*** *key* → ***My Deva*** *button* → ***Internal HD drive*** *button* → ***Current Folder*** *button*)

WARNING: Do not change folders while mirroring is turned 'ON'. Doing so may cause the mirroring process to skip files or cause the Deva to stop responding.

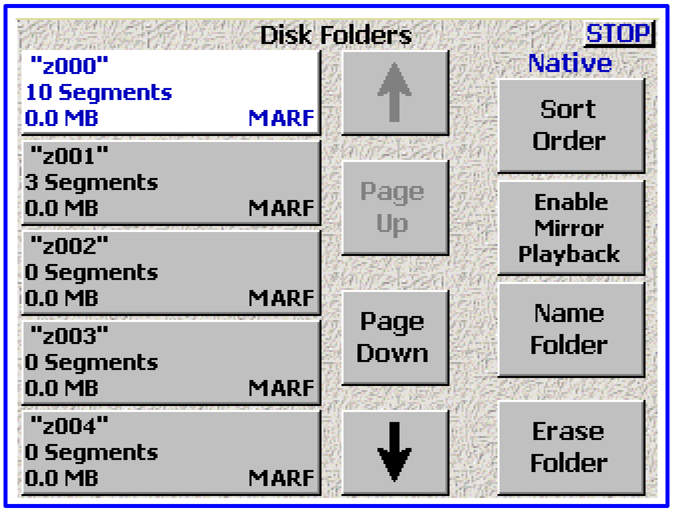


Figure 3-56 Disk Folders page

Page Notes

None

Page Level Shortcuts

None

Folder buttons

Pressing it once while it is not highlighted selects it as the destination folder for audio files recorded from then on.

Pressing it while it is highlighted takes you to the ***Folder "???" Contents page*** {**p.116**}, and displays its contents.

Each of the ***Folder*** *buttons* contains information about the contents of the folder it represents, including: name of the folder, number of segments in the folder, total size of all Segments, and its file format (always **MARF**).

The Folder Name is the Sound Roll Number.

Up Arrow button

Press it to navigate up through the list of folders, one folder at a time.

Sort Order button

- **Native** – Sorted by the sequence it was created.
- **By Name** – Sorted by the name.

Page Up button

Press it to navigate up through the list of folders, five folders at a time.

Enable Mirror Playback button

If the Deva has a CF card installed, this enables you to playback mirrored data from it.
Default setting: disabled.

IMPORTANT: This playback feature is limited and is only for periodic checking of files. Playback from an external FireWire device may not be able to keep up with the playback data rate and may stop after several seconds of playback if the data buffer underruns.

Page Down button

Press it to navigate down through the list of folders, five folders at a time.

Name Folder button

Pressing it opens the ***Keyboard page*** {**p.135**} so you can apply an alphanumeric name to the current folder. This name is the Sound Roll Number. This is currently limited to 8 characters. At the same time that the folder in the Primary Drive is renamed, it is also renamed in the Mirror Drive.

Name Folder button Shortcuts

See: ***Keyboard page*** {**p.135**}.

Down Arrow button

Press it to navigate down through the list of folders, one folder at a time.

Erase Folder button

Pressing it erases the currently selected folder. Once you press it, a confirmation dialog box is displayed to prevent accidentally erasing material.

When it comes time to delete folders, you can sort by date to easily select the oldest folder for deletion.

NOTE: Erasing the folder is not the same as deleting the folder. Only the folder's contents are erased. The folder and its name remain. If you are using Sound Roll Numbers, you will need to change the folder's name to the appropriate Sound Roll Number.

Folder "???" Contents page

Page purpose: This page displays and maintains data for each Take.

How to get here:

- (***MENU*** *key* → ***My Deva*** *button* → ***Internal HD drive*** *button* → ***Current Folder*** *button* → ***Folder*** *buttons*)

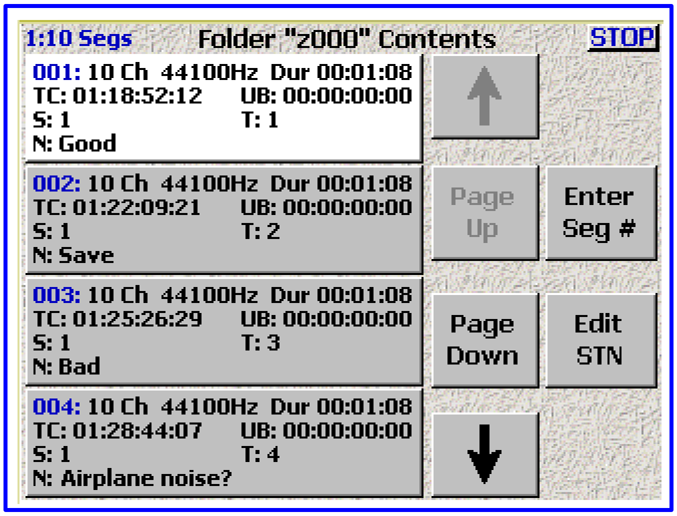


Figure 3-57 Folder "???" Contents page

Page Notes

None

Page Level Shortcuts

None

#:# Segs field

It displays the current segment # and the total number of segments in the current folder. If the current segment # is larger than the total, the data will be applied to the next take, when recording starts.

Take buttons

Pressing it while it is not highlighted, highlights it.

Pressing it while it is highlighted, takes you to the ***Scene Take Note page*** {**p.131**} for that file.

Each of the ***Take*** *buttons* contains information about one Take, including: the segment # (i.e., **001**), number of recorded tracks (i.e., 10 Ch), sampling-rate (i.e., 44100Hz), duration (i.e., Dur 00:01:08), timecode start (i.e., TC:01:18:52:12), user-bits (UB:00:00:00:00), Scene number (i.e., S:1), Take number (i.e., T:1) and a Note (i.e., N:Good).

Up Arrow button

Press it to navigate up through the list of files, one file at a time.

Page Up button

Press it to navigate up through the list of files, four files at a time.

Enter Seg # button

Press it to navigate directly to a specified audio Take (segment).

Enter Seg # button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

Page Down button

Press it to navigate down through the list of files, four files at a time.

Edit STN (Scene, Take, Note) button

Pressing it displays the ***Scene Take Note page*** {**p.131**}.

Down Arrow button

Press it to navigate down through the list of files, one file at a time.

Format Menu Warning page

Page purpose: This page is the next to last safety check to prevent accidentally erasing and reformatting the Primary Drive, preparing it to accept new data.

How to get here:

- (***MENU*** *key* → ***My Deva*** *button* → ***Internal HD drive*** *button* → ***Format Drive*** *button*)

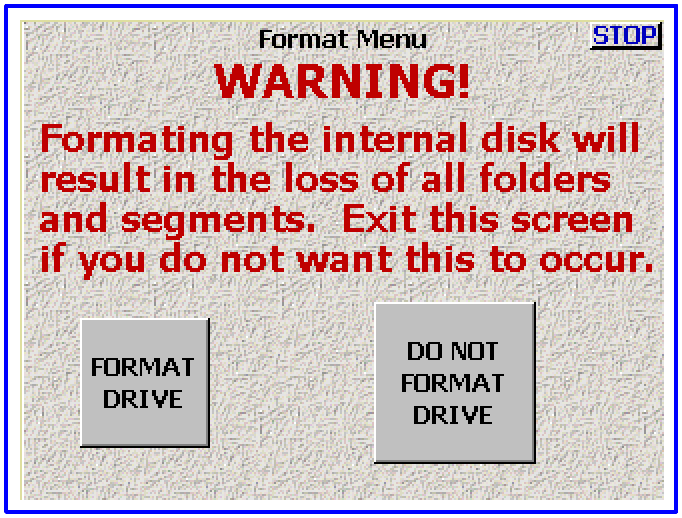


Figure 3-58 Format Menu Warning page

Page Notes

None

Page Level Shortcuts

None

Format Drive button

Once you press it, a dialog box is displayed asking"ARE YOU SURE?" and "OK to FORMAT?".

- If you press the ***OK*** *button*, the screen displays the ***Formatting dialog box*** {**p.119**}.
- If you press the ***Cancel*** *button*, the screen displays the ***Mirror Drive page*** {**p.120**}.

Do Not Format Drive button

Pressing it takes you back to the ***Internal Disk Utilities page*** {**p.113**}.

Formatting dialog box

Page purpose: Performs the Erase and Format process for the Primary Drive.

How to get here:

- (***MENU*** *key* → ***My Deva*** *button* → ***Internal HD drive*** *button* → ***Format Drive*** *button*) → ***Format Drive*** *button*

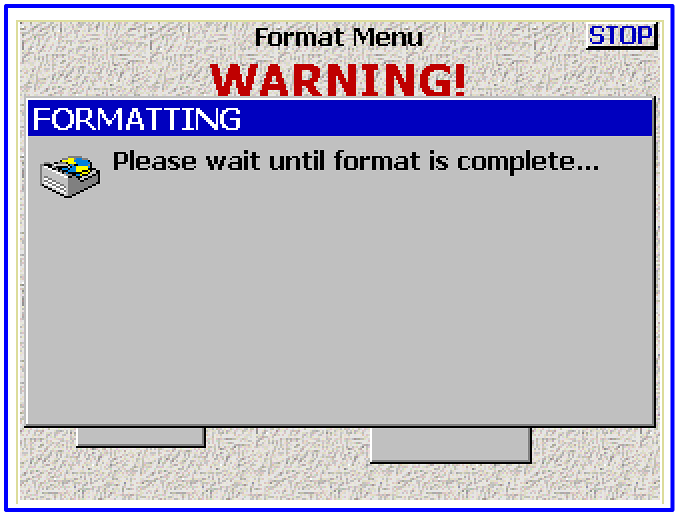


Figure 3-59 Formatting dialog box on top of Format Menu Warning page

Page Notes

The following is an example of what is displayed in the ***FORMATTING*** dialog. Be aware that this will change based on the size of the media being formatted:

```
Formatting Internal Disk
Mounting Internal Disk
 BytesPerSector=512 SectorsPerCluster=64
Counting Free Clusters…
10%  20%  30%  40%  50%  60%  70%  80%  90%  100%   489345 Free
Clusters
Creating ZDIR.ZZZ
Creating </INTHD/ZFILES/ZBLK0000.ZAX>
.
.
.
Creating </INTHD/ZFILES/ZBLK0131.ZAX>
Creating final wrapper file  </INTHD/ZFILES/ZBLK0132.ZAX>
Copying FAT…
Erasing Folder z001
.
.
.
Erasing Folder z127
WrDimg2Disk folder[1] Seg 000
Format is complete.  RE-START Deva NOW
```

Figure 3-60 Screen Display of the Primary Drive Format process

NOTE: It takes about **7** minutes to reformat a 137 GB HDD.

Page Level Shortcuts

None

Mirror Drive page

Page purpose: This page sets the options for mirroring data from the Primary Drive onto other media through the Internal DVD drive, the Internal CF card drive or an externally connected FireWire device.

How to get here:

- (***MENU*** *key* → ***My Deva*** *button* → ***Mirror Drive*** *button*)

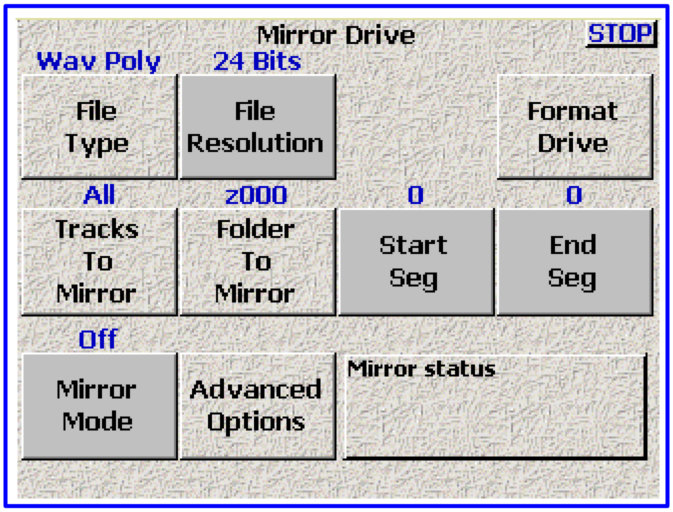


Figure 3-61 Mirror Drive page

Page Notes

None

Page Level Shortcuts

- Typing a number opens a ***Segment number*** *data entry field* (this is the same as pressing the ***Start Seg*** *button*). Type the remainder of the number and press the ***ENTER*** *key*. Once entered, the system accepts it as the ***Start Seg*** *button* data.
- Typing a second number opens a second ***Segment number*** *data entry field* (this is the same as pressing the ***End Seg*** *button*). Type the remainder of the number and press the ***ENTER*** *key*. Once entered, the system accepts it as the ***End Seg*** *button* data.

Segment number data entry field

This field appears above the ***Start Seg*** *button*. It's tied to the values displayed above the ***Start Seg*** *button* and the ***End Seg*** *button*.

Segment number data entry field Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

File Type button

The currently selected file type is displayed above it.

Pressing it displays the ***Mirror File Type page*** {**p.122**}. Default setting: **Wav Poly**

File Resolution button

The currently selected resolution is displayed above it.

Pressing it toggles between the following:

- **24 Bits** – the mirror copy is 24 bits.
- **16 Bits** – the mirror copy is 16 bits.

Format Drive button

Pressing it displays the ***Format Mirror Drive Caution page*** {**p.123**}.

Tracks to Mirror button

The currently selected track(s) are displayed above it.

Pressing it displays the ***Tracks to Mirror page*** {**p.124**}. Default setting: **All**

Folder to Mirror button

The currently selected folder is displayed above it.

Pressing it displays the ***Mirror Folders page*** {**p.125**}.

Start Seg button

The first segment to be archived is displayed above it. The setting is automatically updated when a disc is inserted. If the Deva sees segment 5 is already on the disc, the ***Start Seg*** *button* is set to 6.

Pressing it opens the ***Segment number*** *data entry field*, allowing you to enter the first segment to mirror.

> **NOTE:** A quick method to ensure your disc is readable is to eject and re-insert your mirrored disc after you are finished mirroring. Then check that the Deva recognizes the format and the ***Start Seg*** *button* is set to 1 past the last recorded segment.

End Seg button

The last segment to be archived is displayed above it. In most cases, the ***End Seg*** *button* can be left at **999**.

Pressing it opens the ***Segment number*** *data entry field*, allowing you to select the last segment to mirror.

Mirror Mode button

The currently selected mode is displayed above it.

Pressing it enables / disables the 'Mirroring' process, which writes the audio to the selected mirror device. Once it is turned On, it immediately starts the mirror process.

- **Off** – Disables the mirror process.
- **On-NORMAL** – Enables the mirror process, but only while not recording.
- **On-CONTIN.** – (continuous) Enables the mirror process. If adequate resources are available, it will continue while recording the audio.

> **IMPORTANT:** You must set the mirroring parameters before you turn **On** mirroring. **Do not** change folders while mirroring is turned **On**. Doing so can cause the mirroring process to skip files or cause the Deva to stop responding.

> **IMPORTANT:** You must turn **Off** mirroring to change any of the parameters. When the mirror process is active, all other buttons are disabled until the mirroring process has completed.

> **NOTE:** If you select **On-CONTIN.** and start recording, the ***Disk*** *icon* color, on the ***Home page*** {**p.35**}), will shift between Green and Red, indicating the mirror process is running and pausing.

Advanced Options button

Pressing it displays the ***Advanced Mirror Options page*** {**p.126**}.

Mirror Drive Status button

This button displays the current status of the Mirror Drive and the Mirror process.

Pressing it displays the ***My Deva page*** {**p.112**}.

Mirror File Type page

Page purpose: This page maintains the file format to be used for the audio files copied to the Mirror Drive.

How to get here:

- (***MENU*** *key* → ***My Deva*** *button* → ***Mirror Drive*** *button* → ***File Type*** *button*)

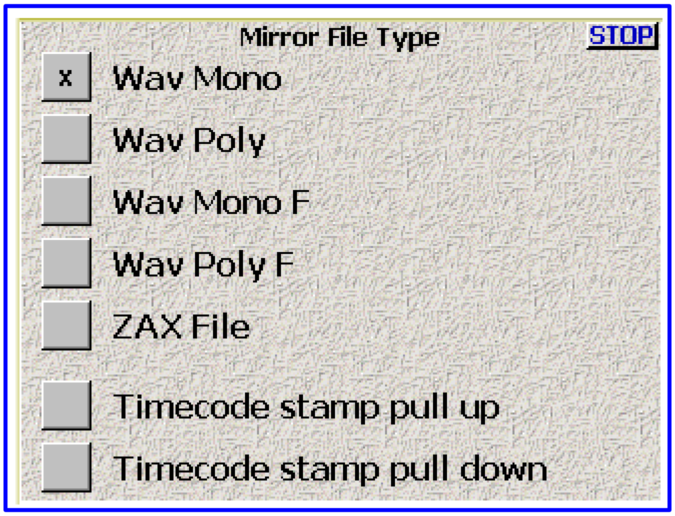


Figure 3-62 Mirror File Type page

Page Notes

None

Page Level Shortcuts

None

File Type buttons

Select the file type to be written to the mirrored device:

- ***Wav Mono*** *button* – (BWF-M) This creates a separate WAV file for each track recorded. When using this option with UDF formatted DVD-RAM discs, the files and discs may not be readable on Mac OS computers.
- ***Wav Poly*** *button* – (BWF-P) This creates a single file containing all of the tracks recorded for a given Take.
- ***Wav Mono F*** *button* – This format is a custom format to ensure recorded audio will playback correctly on Fostex DV40 equipment.
- ***Wav Poly F*** *button* – This creates a single file containing all of the tracks recorded for a given Take with the custom changes necessary to playback correctly on a Fostex DV40.

NOTE: The Wav Poly F mode always stamps the WAV file at 48000 Hz even if the file was recorded at 48048 Hz. Selecting this mode when recording at 48000 Hz has no effect.

- ***ZAX File*** *button* – This format is a custom non-lossy format. Creates .ZAX files, which require the use of Zaxcom's ZAX File Utility to convert to standard broadcast wave or MP3 files.

Pull Up / Down buttons

Select one of these only if the timecode on the mirrored files needs to be pulled up or down:

- ***Timecode stamp pull up*** *button* – Pulls up timecode on mirrored audio. This option is used in conjunction with the file type.
- ***Timecode stamp pull down*** *button* – Pulls down timecode on mirrored audio. This option is used in conjunction with the file type.

Default setting: neither selected

Format Mirror Drive Caution page

Page purpose: This page warns the operator before s/he formats the mirror drive.

How to get here:

- (***MENU*** *key* → ***My Deva*** *button* → ***Mirror Drive*** *button* → ***Format Drive*** *button*)

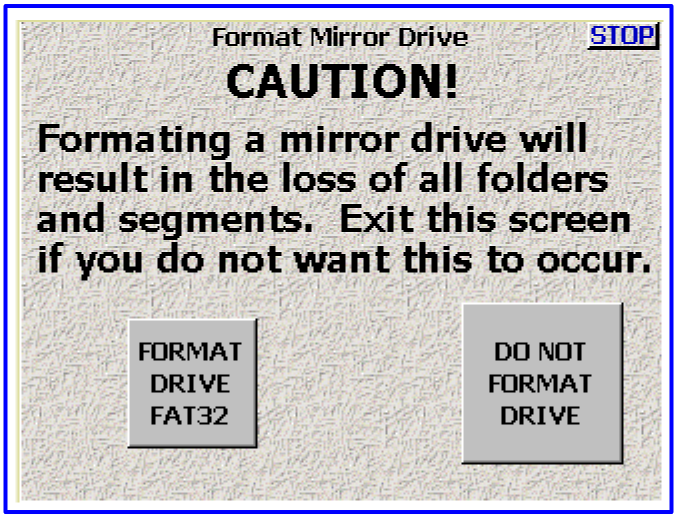


Figure 3-63 Format Mirror Drive page

Page Notes

This page will format:

Media	Format Time
CompactFlash	< 10 seconds
DVD-RAM	< 12 seconds

Table 3-8 Mirror Storage Media Format Time

Page Level Shortcuts

None

Format Drive FAT32 button

Once you press it, a dialog box is displayed asking "OK to FORMAT the drive FAT32?".

- If you press **OK**:
  1. The screen displays the ***Mirror Drive page*** {p.120}.
  2. The ***Mirror Drive Status*** *button* (lower right corner) displays the steps necessary to format the drive.
- If you press **Cancel**, the screen displays the ***Mirror Drive page*** {p.120} and nothing else happens.

IMPORTANT: DVD-RAM discs come pre-formatted as UDF 2.0. While Deva can write to these discs, many computers cannot read UDF 2.0 discs. Always format discs using this button before attempting to use them. The Deva displays "Unrecognized disk format" in any ***Mirror Drive Status button*** {p.38} when the Deva sees a disc that it did not format.

Do Not Format Drive button

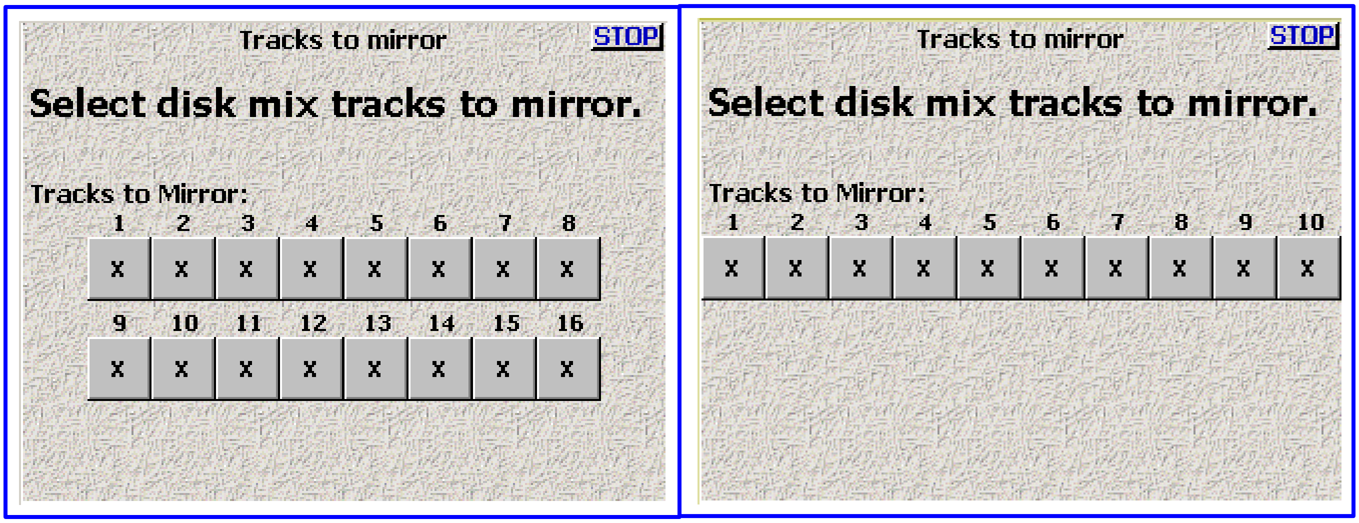
Pressing it takes you back to the ***Mirror Drive page*** {p.120}.

Tracks to Mirror page

Page purpose: This page maintains which tracks are to be written to the mirror drive.

How to get here:

- (***MENU*** *key* → ***My Deva*** *button* → ***Mirror Drive*** *button* → ***Tracks to Mirror*** *button*)



Deva-16 view Deva-5.8 view

Figure 3-64 Tracks to Mirror page

Page Notes

If you have an audio Take with 3 tracks and you have all 16 tracks marked to mirror, the mirror will only create 3 tracks in the mirror copy. The lesson to take away from this: Barring other concerns, always set this page to mirror all of the tracks.

Page Level Shortcuts

None

Tracks to Mirror buttons

Pressing one or more of them selects the track(s) you wish to mirror. Default setting: all tracks

Mirror Folders page

Page purpose: Selects which folder you want to mirror.

How to get here:

- (***MENU*** *key* → ***My Deva*** *button* → ***Mirror Drive*** *button* → ***Folder to Mirror*** *button*)

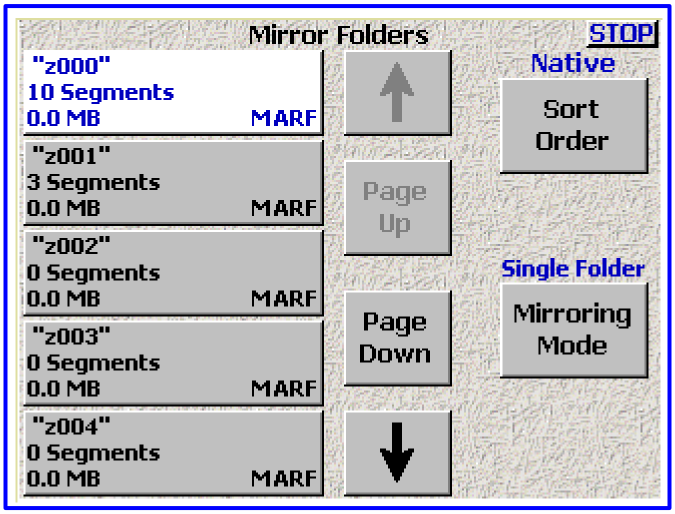


Figure 3-65 Mirror Folders page

Page Notes

None

Page Level Shortcuts

None

Folder buttons

Clicking on one of the folders, highlighting it, identifies it as the folder to mirror, or the folder to start mirroring.

Each of the ***Folder*** *buttons* contains information about the contents of the folder it represents, including: folder name, number of segments in the folder, total size of all Segments, and its file format (always **MARF**).

The Folder Name is the Sound Roll Number.

Up Arrow button

Press it to navigate up through the list of folders, one folder at a time.

Sort Order button

- **Native** – Sorted by the sequence it was created.
- **By Name** – Sorted by the name.

Page Up button

Press it to navigate up through the list of folders, five folders at a time.

Page Down button

Press it to navigate down through the list of folders, five folders at a time.

Mirroring Mode button

- **Single Folder** – Tells the system to mirror (copy) the one identified folder.
- **All Folders** – Tells the system to mirror all folders that have not been previously mirrored.

Down Arrow button

Press it to navigate down through the list of folders, one folder at a time.

Advanced Mirror Options page

Page purpose: This page maintains the timecode offset and to create the Sound Report on the mirror drive.

How to get here:

- (**MENU** key → **My Deva** button → **Mirror Drive** button → **Advanced Options** button)

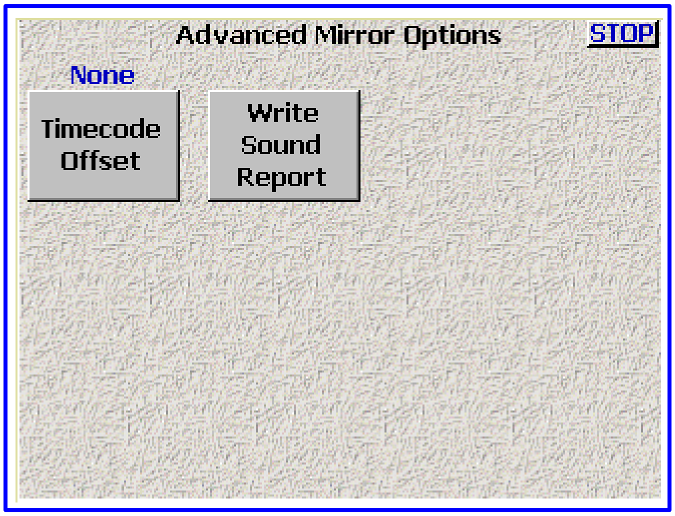


Figure 3-66 Advanced Mirror Options page

Page Notes

None

Page Level Shortcuts

None

Timecode Offset button

Pressing it opens up a dialog to accept the offset value.
(Valid range: **–200** to **0** (**None**) to **+200 ms**, Value step: 1)

NOTE: To enter a minus sign (–) press the zero key first, then the remainder of the number.

Write Sound Report button

Press it to create a sound report on the mirror drive. Once it has completed, **Done** is displayed.

NOTE: If there is no writeable media inserted into the device identified by the ***Mirror Drive Select button*** (**p.112**), **No Disk** is displayed above the button.

NOTE: It is necessary to set the ***Mirror Mode button*** (**p.121**) to **Off** before the Sound Report can be created.

Cue Mode page

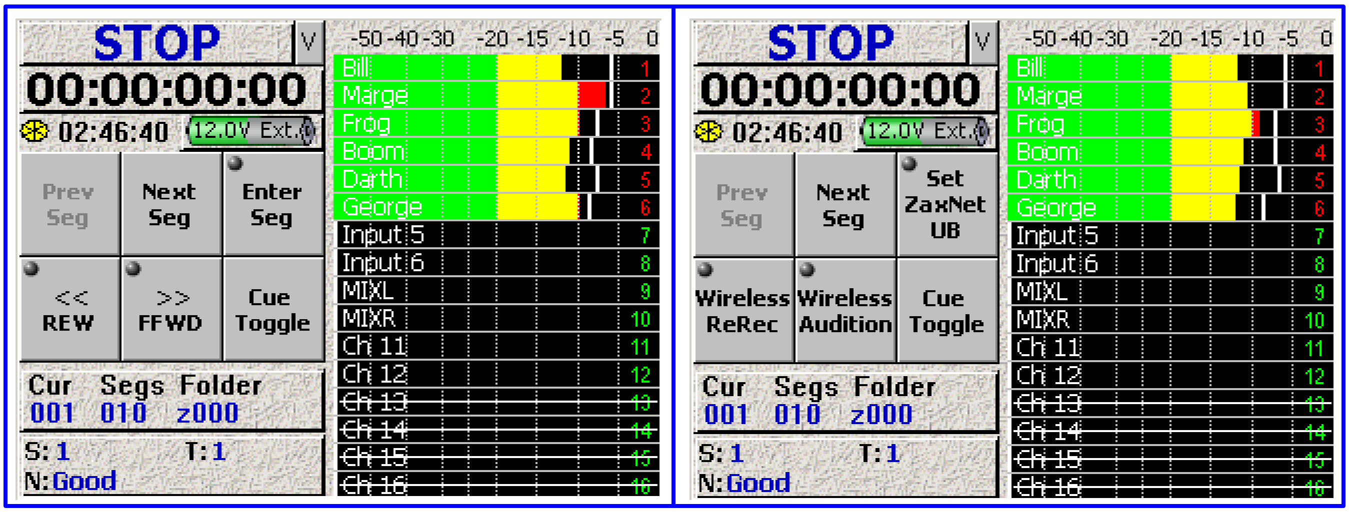
Page purpose: This is the main playback page. It has several uses:

- playback a Take for purposes of reviewing it for usability
- playback a Take to answer a question for another Take
- playback a Take from a wireless that had a "Hit", to re-record it
- playback a Take for the purpose of re-mixing it

To that end, you can select a Take by segment (index) number, timecode or to just Fast Forward or Fast Reverse. When you playback on Deva you do not have to re-cue to where you where recording. You can hit record at anytime without fear of erasing a previously recorded Take.

How to get here:

- (***CUE*** *key*)
- (***MENU*** *key* → ***Cue Mode*** *button*)



Recorder view Wireless view

Figure 3-67 Cue Mode page

Page Notes

If ZaxNet has not been enabled, the following buttons are disabled (grayed-out):

- ***Set ZaxNet UB*** *button*
- ***Wireless ReRec*** *button*
- ***Wireless Audition*** *button*

Page Level Shortcuts

- ***0** – **9** keys* – opens the ***Enter Segment*** *data entry field*. Type the remainder of the number and press the ***ENTER*** *key*. Once entered, the system attempts to move to the day's recording, by the segment # entered. If the number entered is too high, the last available segment is displayed.

Enter Segment data entry field

This field only appears on top of the ***Disk*** *icon* after a number has been entered. This field is tied to the audio recording segment displayed in the ***Cur*** *field* of the ***Cur Segs Folder*** *button*.

Enter Segment data entry field Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

Mode Status button

(***Figure 3-67*** {**p.127**} displays **STOP**)

Located at the top of the page, it displays the current operating mode (**RECORD**, **PLAY** or **STOP**).

Pressing this button from here, takes you to the ***Main Menu page*** {**p.40**}. From any other page, pressing the ***Mode Status*** *button* (or the ***MENU*** *key* on the front panel) takes you back one level.

NOTE: Pressing the ***Mode Status*** *button* does **not** change the Deva's operating mode. It only brings you back one page or level within a page.

View button

(*Figure 3-67* {**p.127**} displays **V**)

Pressing it cycles through four ***Home*** *page* display layouts (see *Figure 3-22* {**p.67**}).

Timecode button

(*Figure 3-67* {**p.127**} displays **00:00:00:00**)

Displays the timecode for the tracks being played.

Pressing it displays the ***Timecode page*** {**p.57**} which has the current timecode.

Disk icon

(*Figure 3-67* {**p.127**} displays a rotating disk with a Yellow highlight.)

The color indicates the current state of the mirror process.

Disk Color	Description
White	Mirror process is looking for work.
Yellow	Mirror process is in standby.
Green	Mirror process is active.
Red	In record mode, mirror process suspended.

Table 3-9 Disk icon Color Code

Remaining Recording Time field

(*Figure 3-67* {**p.127**} displays **02:46:40**.)

It displays the remaining recording time based on the remaining drive space, number of tracks being recorded and the sampling-rate & bit-depth of the track(s).

Battery icon button

(*Figure 3-67* {**p.127**} displays **12.0V Ext.** inside of the ***Battery*** *icon button* and a color bar, indicating the state of charge.)

It displays the voltage and the source (**Int** or **Ext**) at that moment.

Pressing it displays the ***Battery Menu page*** {**p.137**}. Deva automatically switches if it is running on an internal battery, and an external power source, greater than 9.5 VDC, is applied. If the Deva is running on external power **and** a battery is inserted, it will automatically switch to the internal battery when the external power drops below 9.5 VDC. When the voltage drops below the level set in the ***Battery Menu page*** {**p.137**}, the text changes from **Black** to **Red**.

IMPORTANT: Because of the variety of battery chemistries, the Deva does not charge the internal battery.

Prev Seg button

Press it to navigate to the previous segment.

Next Seg button

Press it to navigate to the next segment.

Enter Seg button

Pressing it opens a window to directly enter a segment number.

<< REW button

For each click on the button, it moves backward ~4 seconds and immediately starts playing the Take forward. Hold the button down and the auto-repeat action activates, the current point moves backward (at 4 secs per repeat), until released. At that point, it starts playing forward at normal speed. If held down long enough, the current point will move into the previous Take, and start playing from the point of release.

>> FFWD button

For each click on the button, it moves forward ~4 seconds and immediately starts playing the Take. Hold the button down and the auto-repeat action activates, the current point moves forward (at 4 secs per repeat), until released. At that point, it starts playing at normal speed. . If held down long enough, the current point will move into the next Take, and start playing from the point of release.

Cue Toggle button

- **Deva Cue Toggle** – allows listening to the Deva's audio.
- **Wireless Cue Toggle** – allows listening to and re-recording of the audio recorded on the wireless transmitter(s).

Set ZaxNet UB button

Press it to set the User-bits that are broadcast with the ZaxNet timecode signal. This needs to be a unique value for the day, because it is one of the attributes (including starting timecode) used to locate the correct audio for Wireless Audition and Wireless Re-record.

Wireless ReRec button

Pressing it causes each transmitter to playback the audio for the selected segment and starts the Deva's recorder to re-record the audio. Playback and recording does not stop at the end of the current segment; it will continue until you press the ***STOP*** *key* or the last recorded segment finishes.

Wireless Audition button

Pressing it replays the audio from each transmitter, for the currently selected segment without going into record.

Cur Segs Folder button

(***Figure 3-67*** {**p.127**} displays on the first line **Cur Segs Folder**)

Pressing it displays the ***Disk Folders page*** {**p.114**}.

Cur field

Displays the index number of the current Take (either being recorded or played back).

Segs field

Displays the total number of Takes in the current folder.

Folder field

Displays the name of the currently selected Primary Drive folder, which is where audio recording files are stored. Normally, a new folder is set up for each Sound Roll (each day's work). The Folder Name is the Sound Roll Number. You can rename the folder to anything with a maximum of 6 characters. The name in this field is the default folder when mirroring audio files to the DVD media, CF card or external FireWire device.

NOTE: The current firmware allows each folder to be any size, up to the total capacity of the drive.

S: T: N: button

(***Figure 3-67*** {**p.127**} displays on the first line **S:1 T:7**)

Displays the user entered metadata (Scene, Take, Note) for the current Take (during playback or metadata review) or the NEXT Take to be recorded.

Pressing it displays the ***Scene Take Note page*** {**p.131**}.

Input (#) meters & buttons

(***Figure 3-67*** {**p.127**} displays on the right half of the page)

Up to sixteen* tracks can be displayed. Unarmed tracks are displayed with a line through them. Individual tracks can be shown or hidden using the ***Number of Home Screen Meters*** *button* on the ***Meter Menu page*** {**p.67**}. The meters use PPM / Peak Hold ballistics. The Peak Hold Bar remains for 5 seconds. The color of the audio level bar changes from Green to Yellow when the level reaches -20 dBFS or above, and changes to Red when it reaches -10 dBFS or above. The channel number on the far right changes from Green to Yellow when the Peak Hold Bar reaches -20 dBFS or above, and changes to Red when it reaches -10 dBFS or above.

* Deva-5.8 – maximum 10 tracks, Deva-16 – maximum 16 tracks

Arm / Disarm a Recording Track

Pressing the ***SHIFT*** *key* on Deva's front panel while pressing the appropriate meter on the ***Home*** *page*, arms / disarms the recording of that channel. Disarmed tracks are indicated by a line drawn through the track's meter.

Scene Take Note page

Page purpose: This page maintains the metadata associated with each Take.

How to get here:

- (***MENU*** *key* → ***Scene Take Note*** *button*)

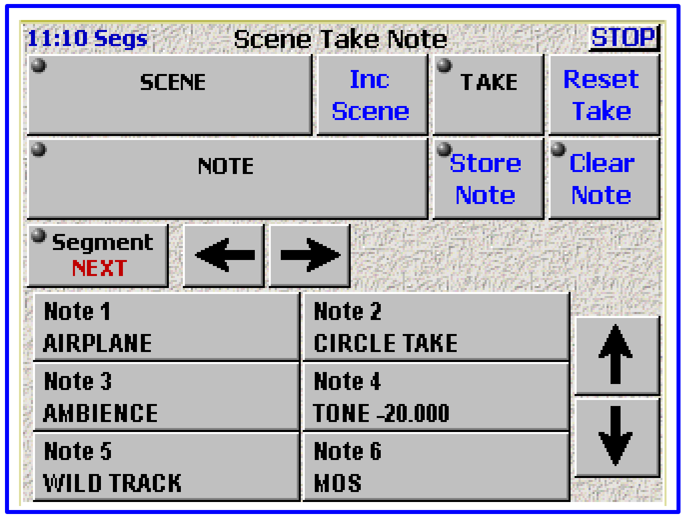


Figure 3-68 Scene Take Note page

Page Notes

- While in any field on this page, if you discover you don't want to commit the change you just made to the current field, press the ***MENU*** *key* or the ***ESC*** *key*.
- The Scene's Info continues from one Take to the next Take, until changed.
- The Take # is incremented from one Take to the next Take, until it is changed or reset, then it will automatically increment from the new starting point.
- The Note's info does not automatically continue from one Take to the next Take.

Page Level Shortcuts

- ***0*** – ***9*** *keys* – opens the ***Enter Segment*** *data entry field*. Type the remainder of the number and press the ***ENTER*** *key*. Once entered, the system attempts to move to the day's recording, by the segment # entered. If the number entered is too high, the segment **NEXT** is displayed.
- ***LEFT*** / ***RIGHT ARROW*** *keys* – navigates from the current recording segment to the previous / next segment.
- ***UP / DOWN ARROW*** *keys* – scrolls up / down through the stored notes in the bottom of the screen.
- ***CTRL*** *key* + single digit – inserts the stored note associated with the number into the current ***Note*** *button* (0=10).
- ***CTRL*** *key* + ***SHIFT*** *key* + single digit – inserts the stored note associated with the number into the current ***Note*** *button*, starting at 11 (1=11, 0=20).
- ***ALT*** *key* + single digit – stores the current ***Note*** *button* into the specified stored note (0=10).
- ***ALT*** *key* + ***SHIFT*** *key* + single digit – stores the current ***Note*** *button* into the specified stored note, starting at 11 (1=11, 0=20).
- ***F8*** *key* – opens the ***Scene*** *button*.
- ***F9*** *key* – opens the ***Take*** *button*.
- ***F10*** *key* – opens the ***Note*** *button*.

Enter Segment data entry field

This field only appears on top of the ***Store Note*** *button* after a number has been entered. This field is tied to the first number in the ***#:# Segs*** *field* and the ***Segment*** *button*.

Enter Segment data entry field Shortcuts

See: Common Data Entry Field Shortcuts List {p.159}

#:# Segs field

It displays the current segment # and the total number of segments in the current folder. If the current segment # is larger than the total, the data will be applied to the next take, when recording starts.
This is reinforced with the ***Segment*** *button* containing **NEXT**.

Scene button

Pressing it displays the ***Keyboard page*** {**p.135**} for **Enter Scene**. You can enter up to 12 characters.

Scene button Shortcuts

See: ***Keyboard page*** {**p.135**}, with the following exception(s):
- ***TAB*** *key* – jumps to the ***Take*** *button* for data entry.

Inc Scene button

Pressing it increments the Scene number by one. It will even increment a letter (upper or lower case) to the next letter in the same case.

Take button

Pressing it displays the ***Keyboard page*** {**p.135**} for **Enter Take**. You can enter up to 6 characters.

Take button Shortcuts

See: ***Keyboard page*** {**p.135**}, with the following exception(s):
- ***TAB*** *key* – jumps to the ***Note*** *button* for data entry.

Reset Take button

Pressing it resets the Take # to 1.

Note button

Pressing it displays the ***Keyboard page*** {**p.135**} for **Enter Note**. You can enter up to 20 characters.

Note button Shortcuts

See: ***Keyboard page*** {**p.135**}, with the following exception(s):
- ***TAB*** *key* – jumps to the ***Scene*** *button* for data entry.

Store Note button

It allows you to store custom notes. To store a note do the following:
1. Press the ***Note*** *button* to open the ***Keyboard page*** {**p.135**} for **Enter Note**.
2. Press the ***Store Note*** *button*.
3. Press one of the ***Stored Note*** *buttons* where you want to store the note.

Stored notes can be used in any segment and folder.

Clear Note button

Pressing it allows you to clear any custom notes. You cannot clear any of the default notes stored in ***Note 1 – Note 8***.

Segment button

Pressing it allows you to select any existing segment to update the metadata. This data can be edited at any time. In order to update the metadata after the fact it must be stored on re-writeable media, i.e. DVD-RAM, HDD, etc. If segment **NEXT** is selected, the data will be applied to the next take, when recording starts.

Segment button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

Left Arrow button

Press it to navigate to the previous segment.

Right Arrow button

Press it to navigate to the next available segment.

Stored Note buttons

Pressing one of these, places the note into the segment's ***Note*** *button*. There are 20 ***Stored Note*** *buttons* to hold the most common notes, instead of manually retyping them each time.

Up Arrow button

Press it to scroll up through the stored notes.

Down Arrow button

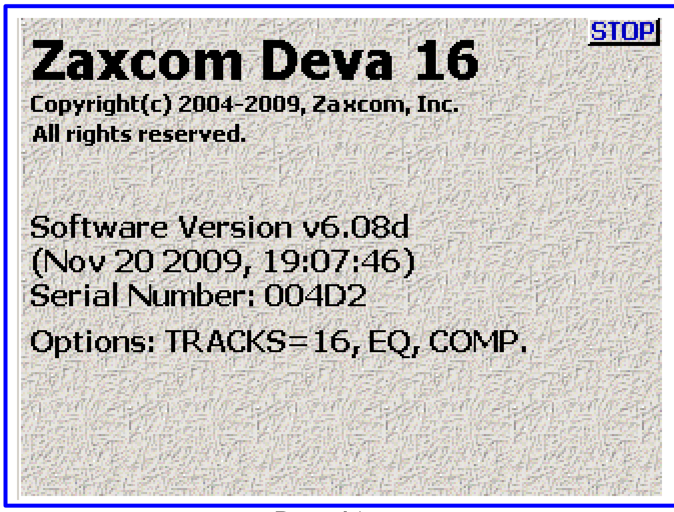
Press it to scroll down through the stored notes.

About Deva page

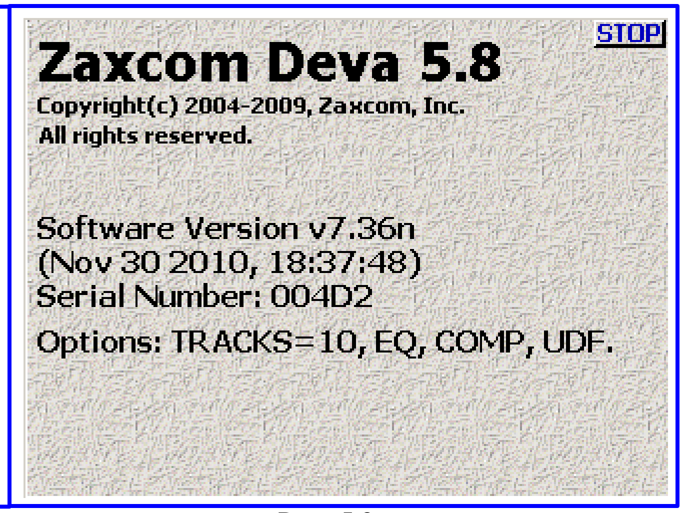
Page purpose: This page displays the current hardware and software information, including: currently installed firmware version, serial number, options installed (Mix-12, EQ, etc.), total number of hours the unit has been powered up, hardware revision and memory information.

How to get here:

- (*MENU* key → *About Deva* button)



Deva-16 view



Deva-5.8 view

Figure 3-69 About Deva page

Page Notes

- On the **Options:** line, **Tracks =** is followed by the number of available recording channels.
  - If you see **EQ**, equalization is enabled.
  - If you see **COMP**, compression is enabled.
  - If you see **UDF**, writing UDF files is enabled.
- The **Serial Number:** line is the same as on the Zaxcom sticker located next to the USB connector on the left side. This number also appears in the Sound report and each audio file. Why? you ask. If you are running 2 or more recorders on a show and one of them has a problem, this will tell you which unit it was. Also, If your unit is ever stolen and the files are turned in, Post facilities and personnel can be notified of the theft and be on the lookout for the serial number.
- The **Total power on time:** line (not shown above) indicates how many hours and minutes the unit has been running. This value can NOT be reset.
- The **Hardware Revision:** line (not shown above) indicates which version of hardware is installed. *
- The **Memory used:** line (not shown above) indicates how much memory is being used. *
- The **Largest free block:** line (not shown above) displays the size of the largest single block of memory currently available. *

* You may be asked for this info as part of an error report.

Page Level Shortcuts

None

Keyboard page

Page purpose: This page makes it easier to enter alphanumeric data for those data fields requiring it.

How to get here: Any field that requires alphanumeric data entry.

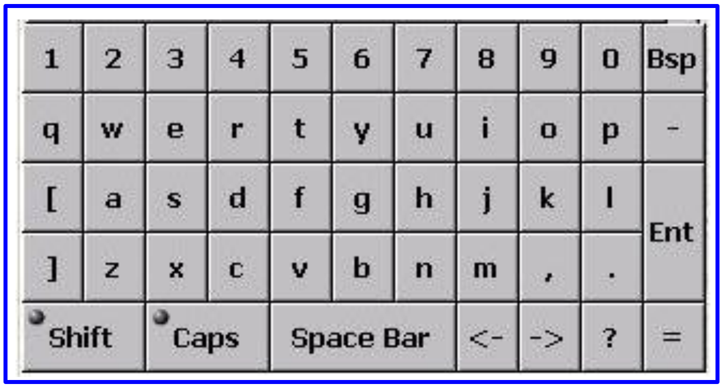


Figure 3-70 Generic Keyboard page

Page Notes

This page appears and overlaps the bottom portion of the screen for which the user wishes to enter data. Immediately above this is displayed a dialog box that describes what data is expected and a textbox to accept those characters.

When you have finished typing, press the ***Ent*** *button* (Enter) or the ***ENTER*** *key* to accept the data. That closes this page and returns to the previous page.

Page Level Shortcuts

- ***HOME*** *key* – moves the cursor to the first character in the field.
- ***END*** *key* – moves the cursor to the last character in the field.
- ***LEFT / RIGHT ARROW*** *keys* – move the cursor left / right.
- ***ESC*** *key* – discards unsaved changes and closes the data entry field.
- ***DEL*** *key* – deletes the character at the cursor and left shifts all characters on the right side of the cursor.
- ***INS*** *key* – moves the cursor to the first character in the field.
- ***ENTER*** *key* – accepts the data, validates it and closes the data entry field.
- ***TAB*** *key* – same as ***ENTER*** *key* but, advances to the next text field (Scene, Take, Note).
- ***BACKSPACE*** *key* –
  1) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  2) If the cursor is not on the first or last character, it deletes the character to the left of the cursor, moves the cursor to the left one character and left shifts the characters on the right of the deleted character by one character.
  3) If the cursor is on the first character, it deletes the character at the cursor and moves the characters right of the cursor to the left one character.

Bsp button

If you press it, one character is removed from the current position in the typing area.

Ent button (Enter)

If you press it, the data is validated, and the data entry field is closed.

Shift button

If you press it, the first on-screen (OS) character button pressed after that is capitalized and the remaining characters are not.

Caps button

If you press it, all OS character buttons pressed after that are capitalized until the ***Caps*** *button* is pressed again.

Left Arrow button

If you press it, the cursor moves to the left.

Right Arrow button

If you press it, the cursor moves to the right.

Battery Menu page

Page purpose: This page maintains the alert voltage and a profile of the battery discharge over time.

How to get here:

- (***Home*** *page* → ***Battery*** *icon button*)

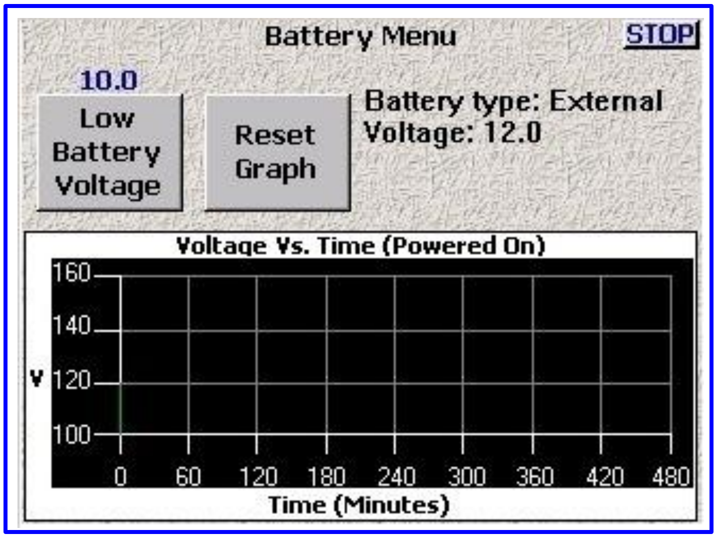


Figure 3-71 Battery Menu page

Page Notes

None

Page Level Shortcuts

None

Low Battery Voltage button

Press it to adjust the threshold voltage level. Once the voltage drops below the specified level, the battery voltage text in the ***Battery*** *icon button* changes from **Black** to **Red**. (Valid range: **10.0** – **13.5**, Value step: 0.1)

Low Battery Voltage button Shortcuts

Pressing it opens a data entry field to accept the new value.
See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exception(s):

- ***BACKSPACE*** *key* – 1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Reset Graph button

Pressing it clears any data being displayed in the ***Voltage vs. Time*** *graph*.

Battery Type field

It indicates where the power is coming from, **Internal** or **External**.

Voltage field

It displays the power source's current real-time voltage.

Voltage vs. Time graph

It displays, in graphic form, the progression over time of the power source's voltage.

Headphone Volume page

Page purpose: This page provides alternate access to adjust the headphone level and appears when Fader 8 has been assigned to a track.

How to get here:

- (***HEADPHONE** button*)

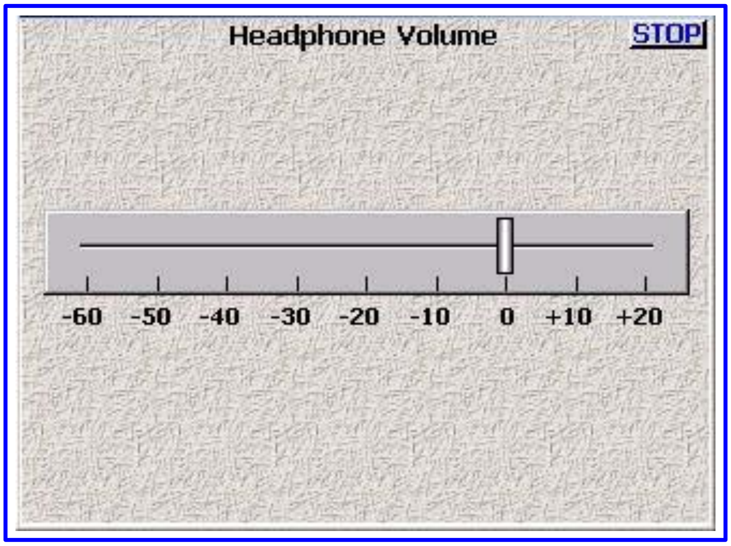


Figure 3-72 Headphone Volume page

Page Notes

As long as the level is being adjusted, this page will continue to be displayed. As soon as the adjustments stop, or were never done, a 3.5 second timer starts counting down. When it reaches zero, this page is closed.

Page Level Shortcuts

- ***LEFT ARROW** key* (keyboard) – decreases the headphone volume by **~4 dB**.
- ***UP ARROW** key* (keyboard) – decreases the headphone volume by **~4 dB**.
- ***RIGHT ARROW** key* (keyboard) – increases the headphone volume by **~4 dB**.
- ***DOWN ARROW** key* (keyboard) – increases the headphone volume by **~4 dB**.

Headphone Linear graphic fader

It is used to adjust the headphone audio level in lieu of Fader 8. The scale is in dB.

False Start dialog

Page purpose: This dialog appears over the **Home page** {**p.35**} and gives the operator the ability to mark a Take as a False Start or just delete it.

How to get here:

- (***FALSE START** key*)

This picture is not yet available

Figure 3-73 False Start dialog on top of Home page

Page Notes

None

Page Level Shortcuts

None

Folder field

It displays the Folder name containing this Take.

Segment field

It displays the Segment # for this Take.

Duration field

It displays the length of this Take. Format is HH:MM:SS.

Scene field

It displays the Scene ID for this Take.

Take field

It displays the Take # for this Take.

Mark it button

When pressed:

1) copies the current Take # to the next Take.
2) adds an **X** to the end of the current Take #.
3) replaces the contents of this Take's Note metadata with **FALSE START**.

Cancel button

When pressed, it closes the ***False Start** dialog*.

Delete it button

When pressed:

1) copies the current Take # to the next Take.
2) deletes the current Take.

IMPORTANT: Deleting segments or folders causes the drive to become fragmented. It is not recommended that you delete anything from the drive (unless it's a FORMAT operation) to insure the drive remains linear to insure maximum performance.

Deva Service Menu Warning page

Page purpose: This page allows new software to be installed and allows the owner / operator to make changes to Deva's functionality.

How to get here:

- (***MENU*** *key* → Type **036** → ***Setup*** *button* → ***Service*** *button*)
- (***Mode Status*** *button* → Type **036** → ***Setup*** *button* → ***Service*** *button*)

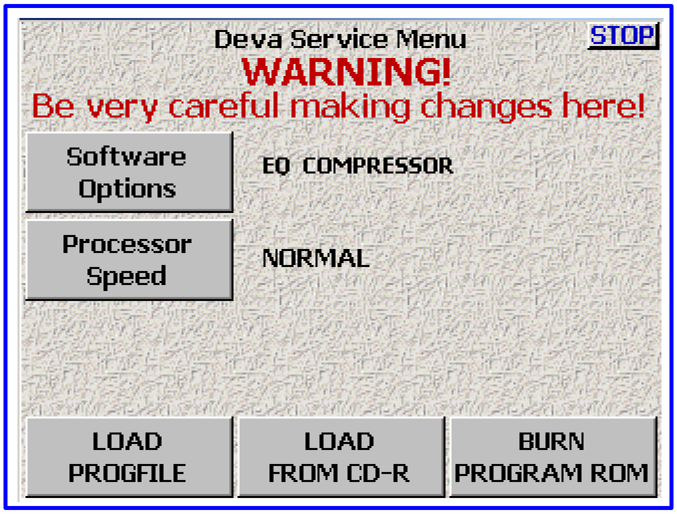


Figure 3-74 Deva Service Menu page

Page Notes

None

Page Level Shortcuts

None

Software Options button

This allows the purchasable options to be enabled in the field, instead of having to send the Unit in to Zaxcom.

Processor Speed button

- **Normal** – Runs the processor at 245.76 MHz.
- **High** – Runs the processor at 294.912 MHz.

This allows the owner / operator to change the operating speed of the processor. (These processor speeds are based on the software and hardware configuration used to create this User Manual. YMMV!)

NOTE: High – Increases the mirroring process performance by 20%.

Load ProgFile button

Load From CD-R button

Burn Program ROM button

See the section: *Upgrading the Firmware in Each Unit* {**p.178**}.

Debug Screen dialog box

Page purpose: It allows you to upgrade the firmware and perform some basic diagnostic routines.

How to get here:

- (***MENU*** *key* → Type **1967**)
- (***Mode Status*** *button* → Type **1967**)

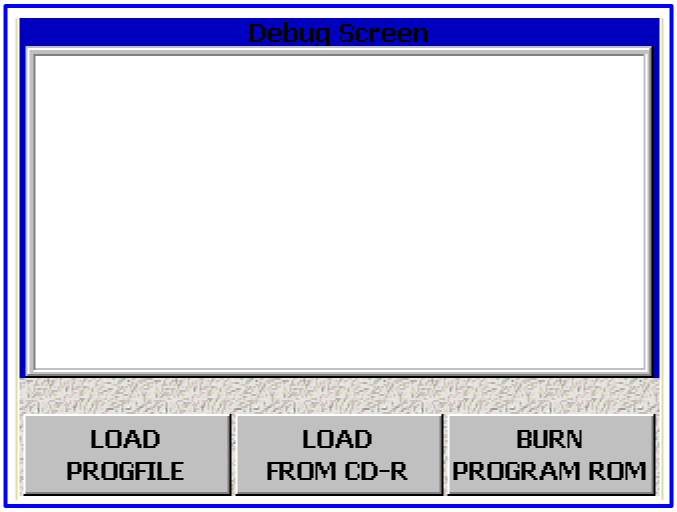


Figure 3-75 Debug Screen page

CAUTION: Once you have finished working in 1967 mode, you **SHOULD** reboot the machine or it may become **UNSTABLE**.

Page Notes

None

Page Level Shortcuts

Here is a summary of the available ***F5*** *key* commands:

- ***F5*** *key* then ***1*** – Restart the Deva. This can help some FireWire devices mount properly.
- ***F5*** *key* then ***4*** – **NEW** – Import settings (INI files) FROM the Mirror Drive.
- ***F5*** *key* then ***5*** – **NEW** – Export settings TO the Mirror Drive (and print debug info).

*B and *P Diagnostic Flags

On very rare occasions a ***B** or ***P** may appear either during the recording process or mirroring process. Both diagnostic flags continue to display until the unit is powered 'OFF'. If either of these diagnostic flags occurs, you should contact Zaxcom's technical support department.

NOTE: The ***B** *flag* and ***P** *flag* appear in the ***Mirror Drive Status*** *button*.

*B Flag

The ***B** *flag* is a minor problem and means the Deva hit a breakpoint instruction. This happens when the Deva comes across an error it does not know how to handle.

*P Flag

The ***P** *flag* is a serious problem and usually occurs if the FireWire drive is unplugged in the middle of an access. If this flag is displayed, REBOOT IMMEDIATELY.

Chapter 4 – Setting Up the Power and Audio Connections

This section describes how to connect external mic- and line-level devices, and enter the proper settings to make these connections work.

NOTE: If you aren't sure how to get to any of the menu pages mentioned in the remainder of this user manual, refer back to the specific reference page in chapter 2. There, in an item titled **How to get here:**, you will find the sequence of key / button presses to move through the menu to get to that specific page.

The Deva has factory default settings that allow the operator to power up and start recording in approximately 14 seconds. One of the defaults causes the ***Home page*** {**p.35**} to appear once the Deva has finished its startup sequence. This can be changed with the ***User Interface Settings page*** {**p.85**}.

Power

The Deva can be connected to an A/C power supply, or to an internal or external battery.

Internal Power

The Deva uses a single NP-1 style battery. All chemistries are supported, including the newer Lithium-Ions. See the ***Left Side Description*** {**p.27**} for the Battery Compartment's location and POWER SOURCE WARNINGS.

IMPORTANT: Although all battery chemistries are supported, this is only for accepting power from them. The Deva does not have a built-in charger.

External Power

The Deva can use external power, connected to the XLR-4M, as long as it supplies the proper voltage. See the ***Left Side Description*** {**p.27**} for the External Power connector's location and POWER SOURCE WARNINGS.

Whenever the power input connector has an adequate power source connected, it is the source of power for the Deva.

NOTE: If you need to run on battery power for an extended period of time, and need to record during this time, connect an external battery to Deva when the internal battery is low. When an external power source is used, the Deva automatically switches to this power source. This enables you to continue recording while you swap out the internal battery.

NOTE: Alternatively, if you are down to your last battery and you don't completely trust the external power source, install your battery and connect the external power source. If the external source should fail, the Deva will automatically switch to internal power until the external source returns.

Battery Display

The ***Home page*** {**p.35**} displays the source of power and its voltage.

When the voltage of any internal or external power source drops below the user-defined level, the color of the battery indicator changes to **Red**. When the power source voltage drops below 9.5 volts, the unit shuts down.

IMPORTANT: When the unit shuts itself 'OFF' due to power loss or insufficient power, the audio tracks are left in the "open" state. When turned back 'ON', it automatically scans for those files and closes them. This process can take several minutes and nothing else can be done until it has completed.

Battery Chemistry

When using newer chemistry batteries, such as Lithium-Ion, you must be aware of their unique power curve. Up until the point where these batteries are exhausted, they show a full-charge. When using this type of battery, it is best to test how long it normally takes for the battery to discharge fully, and use this time as your guide along with the battery meter.

Setting the Battery Threshold

The ***Battery Menu page*** {**p.137**} is accessed by pressing the ***Battery*** *icon button* on the ***Home page*** {**p.35**}.

The graph displays the power source voltage as it varies over time. The curve is unique for each battery chemistry (Li-Ion, NiMH). To change the threshold when the battery indicator (on the **Home page** {**p.35**}) changes to **Red**, perform the following:

1. Press the ***Low Battery Voltage*** *button*.
2. Using the numeric keys, enter the new threshold voltage. To enter a decimal point, press the ***SHIFT*** *key* on the front panel or keyboard.
3. Either press the ***Low Battery Voltage*** *button* again, or press the ***ENTER*** *key* on the front panel or keyboard.
4. Press the ***Mode Status*** *button* or the ***MENU*** *key* to return to the **Home page** {**p.35**}.

Time and Date

The Deva has a time and date store, accessed through the **Time/Date page** {**p.80**}.

Enter the current time using the ***Set Time*** *button*. Unless there is a really good reason to the contrary, insure that the ***Time mode*** *button* is set to **24 HR**.

Unless you are syncing with Aaton equipment, insure that the ***Date mode*** *button* is set to **USA**. Enter the current date using the ***Set Date*** *button*. If the ***Date mode*** *button* has **USA**, the sequence to enter is month / day / year. If it has **EUROPE**, the sequence is day / month / year.

Analog / Digital Audio Inputs

The Deva supports both analog and digital audio inputs. The right side has eight XLR-3F analog inputs. See the **Right Side Description** {**p.29**} for the location of these connectors. The left side has a DB-15F digital input connector. See the **Left Side Description** {**p.27**} for the location of this connector. A breakout cable is required to use the digital inputs.

NOTE: A breakout cable can be purchased from Zaxcom as an option, or through many retailers. If you want to manufacture your own, pin-outs for the connectors are provided (see **Chapter 10 – Connector Pinouts** {**p.173**})

Each of the eight analog inputs can be used with a mic- or line-level signal.

The AES input breakout cable has a DB-15 connector that fans out to four separate XLR style inputs. Each input is a stereo pair (Input 1,2; Input 3,4; Input 5,6; Input 7,8). You can use any combination of these inputs with your Deva. The input number is written on each cable. You can assign these inputs to any channel or combinations of channels.

CAUTION: Prior to connecting any analog input to the Deva, you should ensure the mic / line input connectors are setup correctly in the **Input Configure page (Analog Inputs selected)** {**p.87**}. When connecting microphones, you should always connect them with the Deva powered down (turned OFF).

The **Input Configure page (Analog Inputs selected)** {**p.87**} and its child pages contain parameters to independently:

- set each input's signal level (mic / line) (Analog Only)
- enable and adjust each input's highpass filter (Analog / Digital)
- enable each input's phantom power (Analog Only)
- adjust each input's trim (Analog / Digital)
- enable and adjust each input's delay time (Analog / Digital)
- enable each input's limiter (Analog Only)
- enable and adjust each inputs compression settings (Analog / Digital)
- enable and adjust each input's equalization settings (Analog / Digital)
- assign output routing for each input (Analog / Digital)

Pressing the ***Mode Status*** *button* in the upper-right corner or ***MENU*** *key* brings you back to the **Main Menu page** {**p.40**}.

Pressing one of the ***Analog (#)*** *buttons*, displays the **Analog Input (#) page** {**p.89**} for that channel. All functions for a single input channel can be adjusted from within the ***Analog Input (#)*** *page*.

Switching Between Mic- and Line-Level Input (Analog Only)

To toggle a channel between Mic-level and Line-level, perform the following, on the ***Input Configure page (Analog Inputs selected)*** {**p.87**}:

1. Press the ***Mic/Line Level*** *button* on the page. The LED on it flashes green indicating it's active.
2. Press one of the ***Analog (#)*** *buttons* for the channel you want to change. It displays the current mic / line level setting.
3. Repeat #2 for each additional channel you want to change.
4. Once the last channel has been changed, press the ***Mic/Line Level*** *button* again. The LED stops flashing.

Enabling the High Pass Filter (Analog / Digital)

Setting the High Pass Filter value

To set the Highpass Frequency, perform the following, on the ***Input Configure page (Analog Inputs selected)*** {**p.87**}:

1. Press the ***High Pass (#) Hz*** *button*. You are prompted to enter the highpass frequency in Hz.
2. Enter the frequency using the numeric keys. The valid frequency range is **30 Hz** to **240 Hz**. Any value outside this range is placed near the closest valid number within this range.
3. Press ***High Pass (#) Hz*** *button* or the ***ENTER*** *key* to finish entering the Cutoff Frequency.

NOTE: The Cutoff Frequency value last entered becomes the default value for the next Cutoff Frequency.

Setting the High Pass Filter Frequency on Multiple Channels

To copy the Cutoff Frequency from part #1 to the appropriate channels, perform the following on the ***Input Configure page (Analog Inputs selected)*** {**p.87**}:

1. Press the ***High Pass Filter*** *button*. (The button's LED indicator flashes green while it is active.)
2. Press one of the ***Analog (#)*** *buttons* for the channel to which you want the highpass filter applied. (The HPF indicator on the button changes to the selected Cutoff Frequency.)
3. Repeat #2 for each channel you want to change.
4. Once the last channel has been changed, press the ***High Pass Filter*** *button* again. (The LED stops flashing.)

NOTE: To disable the highpass filter, press the ***High Pass Filter*** *button* on the ***Input Configure page (Analog Inputs selected)*** {**p.87**}, and then press the channel(s) you want to disable.

Enabling 48 VDC Phantom Power (Analog Only)

Some microphones require external power to operate. The Deva supplies the full power and current allowed by the phantom power specification (48 VDC up to 1.0 A). The Deva does not supply 12T power, which is required by some older microphones. If you use microphones requiring 12T power, check with your local audio dealer for phantom to 12T power converters.

To enable phantom power, perform the following:

1. Press one of the ***Analog (#)*** *buttons* on the ***Input Configure page (Analog Inputs selected)*** {**p.87**}. (The ***Analog Input (#) page*** {**p.89**} for that channel is displayed.)
2. Press the ***48V (On / Off)*** *button*. (The text changes to **48V On** indicating it is active.)

IMPORTANT: To protect equipment from damage, the Deva does not allow you to apply power to any channel set as a line-level input.

Adjusting the Trim (Analog / Digital)

There are two ways to adjust the input trim on channels. If you have multiple inputs, the ***(Analog / Digital) Input Trim page*** {**p.111**} allows you adjust all of them from a single page. However, if you are making individual adjustments to channels, the trim can be adjusted using the on-screen fader in the ***Analog Input (#) page*** {**p.89**}.

Adjusting the Trim using the Analog / Digital Input Trim page

1. Press the ***Adjust Trim*** *button* on the ***Input Configure page (Analog Inputs selected)*** {**p.87**}. (The ***(Analog / Digital) Input Trim page*** {**p.111**} is displayed.)
2. Press the meter for the channel you want to adjust. (When a channel is activated, **Trim: ?? dB** changes to **Trim: ?? dB**.)

3. Press the ***Less Gain*** *button* or ***More Gain*** *button* to adjust the selected channel(s).
4. Repeat steps 2 and 3 for each additional channel, as appropriate.

All Trim settings can be reset to **0 dB** by pressing the ***Clear Trim*** *button*. A dialog appears after pressing the ***Clear Trim*** *button* requesting confirmation that you want to clear all of the trim settings.

NOTE: If all channels are going to be set at the same level, you can save time by changing them at the same time. Press the ***Select All*** *button*. Any change made to the level is applied simultaneously to all of the channels.

Pressing either the ***Mode Status*** *button* in the upper-right corner of the page or using the ***MENU*** *key* exits the ***(Analog / Digital) Input Trim page*** {**p.111**} and returns you to the ***Input Configure page (Analog Inputs selected)*** {**p.87**}.

Adjusting Individual Trim Levels Using the Input (#) page

1. Press one of the ***Analog (#)*** *buttons* on the ***Input Configure page (Analog Inputs selected)*** {**p.87**}. (The ***Analog Input (#) page*** {**p.89**} for that channel is displayed.)
2. Slide the graphic fader to the desired position.

Adjusting the Delay (Analog / Digital)

The delay in the Deva provides a way to monitor various input sources that may come into the Deva at slightly different times. For example, wireless microphones typically require 0 to 8 ms of delay to avoid phasing associated with mixing wired and wireless sources to a common mix track. The delay does not affect the input signals actual timecode; it simply allows the signal to align with other sources mixed with it. Both analog and digital inputs can have a delay added to them.

There are two ways to adjust the delay on channels. If you have multiple inputs, the ***(Analog / Digital) Input Delay page*** {**p.109**} allows you to adjust all channels from a single page. However, if you are making individual adjustments to channels, the delay can be adjusted using the ***Delay*** *button* in the ***Analog Input (#) page*** {**p.89**}.

Adjusting the Delay Using the Input Delay page

1. Press the ***Adjust Delay*** *button* on the ***Input Configure page (Analog Inputs selected)*** {**p.87**}. (The ***(Analog / Digital) Input Delay page*** {**p.109**} is displayed.)
2. Press one of the ***Channel (#)*** *buttons* for the channel that requires a delay. (The button changes to White.)
3. Press the ***More Delay*** *button* to add delay. If Delay has been added to a channel, the ***Less Delay*** *button* is active and can be used to reduce the amount of delay. A maximum of 40 ms of delay can be added to each channel.
4. Repeat Steps 2 and 3 for additional channel(s).

As an alternative to pressing the ***More Delay*** *button* or ***Less Delay*** *button*, you can press the ***Enter Delay*** *button* and manually enter the delay using the keypad.

Pressing the ***Mode Status*** *button* in the upper-right corner of the page or using the ***MENU*** *key* exits the ***(Analog / Digital) Input Delay page*** {**p.109**} and brings you back to the ***Input Configure page (Analog Inputs selected)*** {**p.87**}.

Adjusting the Delay Using the Input (#) page

1. Press one of the ***Analog (#)*** *buttons* on the ***Input Configure page (Analog Inputs selected)*** {**p.87**}. (The ***Analog Input (#) page*** {**p.89**} for that channel is displayed.)
2. Press the ***Delay*** *button*. (A dialog appears requesting the amount of delay.)
3. Enter the amount of delay using the numeric keys.
4. Press the ***ENTER*** *key* to complete entering the delay amount.

Pressing either the ***Mode Status*** *button* in the upper-right corner of the page or the ***MENU*** *key* exits the ***Analog Input (#) page*** {**p.89**} and returns you to the ***Input Configure page (Analog Inputs selected)*** {**p.87**}.

Analog Audio Outputs

The Deva has an optional analog output cable, with a DB-25 connector. This cable connects to the right side of the Deva. See the ***Right Side Description*** {**p.29**} for the location of this connector.

The DB-25 connector fans out to six separate XLR outputs. A breakout cable can be purchased from Zaxcom as an option, or through many retailers. A wiring diagram is also provided in this manual if you want to manufacture your own breakout cable (see ***Chapter 9 – Equipment Specifications*** {**p.169**}).

The eight outputs (six outputs in Deva-5.8) can be assigned from any combination of channels.

Digital Audio Outputs

The Deva has an optional AES output cable, with a DB-15 connector. This cable connects to the left side of the Deva. See the ***Left Side Description*** {**p.27**} for the location of this connector.

The DB-15 connector fans out to four separate XLR style outputs. Each output is an interleaved AES3 pair (Output 1,2; Output 3,4; Output 5,6; Output 7,8). You can use any combination of these outputs with your Deva. The output channel number is written on each cable. You can assign these outputs to any channel(s).

A breakout cable can be purchased from Zaxcom as an option, or through many retailers. A wiring diagram for the connector is provided in this manual if you want to manufacture your own breakout cable (see ***Chapter 10 – Connector Pinouts*** {**p.173**}).

The eight outputs can be assigned from any combination of channels.

Camera / Line In Connector

Deva-5.8

The Camera connector is a 10-pin Hirose connector and is located on the Deva's right side. Only output channels 5 and 6 are available through it.

A monitor return from the camera's headphone output is available using the camera connector. This audio can be monitored using the Deva-5.8. The return channels on the camera cable are summed into a mono feed.

The Camera break-out cable is available from retailers. Pin-outs for it are provided in this manual if you want to manufacture your own (see ***Line In / Camera Connector (Hirose-10)*** {**p.176**} on the ***right*** side).

Deva-16

The Line In connector is a 10-pin Hirose connector and is located on the Deva's right side. It is associated with analog inputs 9 – 12. When activated they are patched into and replace digital inputs 1 – 4, respectively.

The Line In break-out cable is available from retailers. Pin-outs for it are provided in this manual if you want to manufacture your own (see ***Line In / Camera Connector (Hirose-10)*** {**p.176**} on the ***left*** side).

Configuring Analog Inputs 9 – 12 (Deva-16 only)

> **NOTE:** If you are new to the Deva way of doing things, **WE HIGHLY RECOMMEND** that you learn how to setup a normal analog channel before implementing the instructions in this section. Trust us, it will be easier in the long run.

By default, digital inputs 1 – 4 are just that … DIGITAL. But, it is possible to connect them to the analog side and make them analog inputs 9 – 12. "Why?", I hear you ask. Well … I don't know why you would need them. If it was me, I could connect 4 more wireless analog microphone receivers. In fact, I could connect any line-level source.

So now the question is: "How do I reassign those digital inputs to the analog inputs?" Follow the sequence below:

1. Plug the channel 9 – 12 analog input cable into the Line-in Connector (located on the right side of the unit).
2. Connect your Line-level source to the appropriate connector of the cable you just plugged-in.
3. Display the ***Input Configure page (Analog Inputs selected)*** {**p.87**}.
4. Repeatedly press the ***(Analog / Digital / Line Lvl) Inputs Toggle*** *button* until its text changes to ***Line Lvl Inputs Toggle***. (Across the top of the page the ***Line 9*** – ***Line 12*** *buttons* are displayed.)
5. Press the ***Route Line Lvl Input*** *button*. (The light in the corner of the button starts blinking.)
6. Press the ***Line 9*** *button*. (The ***Line 9*** and ***Line 10*** *buttons* indicate they have been "Routed to" the appropriate digital channels.)
7. Press the ***Line 11*** *button*. (The ***Line 11*** and ***Line 12*** *buttons* indicate they have been "Routed to" the appropriate digital channels.)
8. Press the ***Route Line Lvl Input*** *button* again to turn OFF the blinking light.
9. If you display the ***Input Meter Menu page*** {**p.70**}, you should see the audio coming in on the appropriate digital input meter.
10. (Remember, although it says digital, it is really an analog channel plugged-into the source.)
11. Display the ***Disk Mix page*** {**p.42**}.
12. Press the ***(Analog / Digital) In Toggle*** *button* to change the text to ***Digital In Toggle***.
13. Assign the appropriate inputs (of In1 – In4) as you would normally setup the analog side.

14. Display the ***Input Configure page (Digital Inputs selected)*** {**p.98**}.
15. Configure the appropriate inputs (of In1 – In4) as you would normally setup the analog side (remembering that these inputs will only support a line-level source).
16. You're done. Now enjoy those extra analog line-level inputs!

Assigning Inputs to Recording Tracks and Outputs

The flexibility of the Deva is highlighted in the way it handles the routing. Routing on the Deva allows you to assign any combination of inputs to any combination of channels and outputs. This section describes how to assign both inputs and outputs.

Assigning Inputs to Recording Tracks

A single digital or analog input can be assigned to any number of recording tracks, including sharing the same recording channel, using the ***Disk Mix page*** {**p.42**}.

The top line shows the 8 available input channels (In1 – In8) plus the slate mic and the tone generator. The vertical line of numbers on the right shows the 16 (or 10) available recording tracks. The bottom row of buttons controls the parameters of the matrix selections.

Each track's input can be pre- or post-fader, with or without the phase being inverted. This can be done for both analog and digital signals. Since there are many options, some of the following steps can be skipped.

To assign an input to a track, perform the following:

1. Press the ***(Analog / Digital) In Toggle*** *button* to select the input source you are assigning.
   (The button changes indicating which input is currently active.)
2. Press the ***(Pre- / Post-) Fader*** *button* to select what type of signal you want recorded.
   (The button changes to indicate what is selected.) Pre-fader inputs are not affected by any changes made using the linear faders, however all EQ, Trim and delay settings for that track are used.
3. Press the button in the matrix, at the intersection of the input channel and output track, where you want to record that specific input.
4. To invert any of the input's phase, perform the following:
   a. Press the ***Phase Invert*** *button* to invert the input's phase.
      (The LED changes to green when Phase Invert is active.)
   b. Press one of the ***Disk Mix*** *matrix buttons* for each signal you want to phase invert. (The button now includes an overscore character.) You can invert the signal on one or both of the digital and analog inputs.
   c. Once you have finished inverting the phase on tracks, press the ***Phase Invert*** *button* again.
      (The LED turns OFF to indicate it has been disabled.)

Setting the Number of Tracks Recorded

Once the routing is assigned, you use the ***Record Track Select page*** {**p.63**} to enable which tracks are recorded.

Any track that has an input assigned to it, displays the track number in **Blue**, in the bottom half of the page. You can record any combination of tracks; however, you must have at least one track enabled for recording. Four buttons are available which enable you to quickly setup the number of tracks recorded.

Perform the following to enable tracks for recording:

1. Press the button below each track that has a **Blue** track number.
   (An **X** is placed in the button indicating it is enabled for recording.)
2. Once a track is enabled for recording, pressing the button again disables recording of that track.

> **NOTE:** Pressing the ***SHIFT*** *key*, then pressing the appropriate meter on the ***Home page*** {**p.35**} toggles the recording of that track. This is also known as arming the track.

Set the Sampling-rate for Recorded Tracks

Display the ***Sample Rate page*** {**p.62**} and press the button with the desired sample-rate.

> **NOTE:** After changing the sampling-rate, timecode may need to be re-jammed.

Assign Inputs to Output Channels

The ***Output Mix page*** {**p.47**} makes assigning the audio inputs to output channels, identical to assigning audio inputs to recording channels. They use the same style matrix and have all the same settings.

Like the ***Disk Mix page*** {**p.42**}, any combination of signals can be assigned to a vast number of output possibilities.

Overview of Input Signals

The ***Input Meter Menu page*** {**p.70**} provides a quick overview of all input signals. Because of the flexibility of the routing, you may run into situations where you need to try to determine if a signal is actually coming into the Deva on a particular input.

Overview of Output Signals

The ***Output Meter Menu page*** {**p.71**} provides a quick overview of all output signals. Because of the flexibility of the routing, you may run into situations where you need to try to determine if a signal is actually going out of the Deva on a particular output.

Chapter 5 – Settings for Recording

Once the input cables are connected, there are many setup decisions to be made. In the previous section, the basic settings for the input and output channels were explained. This section describes recording settings.

NOTE: There is no one way to setup a Deva correctly, nor do any of the settings described here have to be done in any certain order.

Storing the Data

The size of the hard-disk drive determines how much data can be stored.

Selecting a folder

Display the ***Disk Folders page*** {**p.114**} to indicate which folder will be used to store the audio files. By clicking on one of the folders, and indicated by it turning White, all audio will be sent to that one folder.

While there, if you don't like the folder name, you can press the ***Name Folder*** *button* to change it. You have eight characters available. One option is to use the date of recording (i.e. YYYYMMDD format).

Setting the Pre-record Duration

From the point the Deva is powered up, it is always processing data. Any sound coming in from any input is always being processed. When pre-record time is enabled, the signal is held in a buffer with a length specified by you until you press the ***REC*** *key*. At that time, all audio in the buffer is stored in the current Take. Once that is done, the audio coming from each of the inputs is stored in the current Take until the ***STOP*** *key* is pressed.

IMPORTANT: In order to use the pre-record functionality, you must have previously selected **48048** or lower in the ***Sample Rate page*** {**p.62**}.

To adjust the pre-record time, display the ***Setup page*** {**p.60**} and press the ***Pre-Record Time*** *button*. Every time you press the button it increments by 1 second, starting at OFF (0 seconds) and going up to 10 seconds.

NOTE: The pre-record buffer is discarded after any of the following settings are changed:

- Sample Rate Reference
- Sampling-rate
- Timecode
- User-bits
- Frame-rate

Set the Tone Level and Destinations

The Deva provides a calibrated tone level, which can be placed on any output channel or recorded track. This tone level is used to calibrate cameras to the audio sent from the Deva, and Post Production facilities to ensure all levels are correct.

To adjust the tone level, display the ***Setup page*** {**p.60**} and press the ***Tone Level*** *button*. Every time you press the button it increments by 2 dB, starting at -20 dB and going up to -12 dB.

Set the Tone output

Once the tone's level has been selected, you have to tell Deva where the tone will be used. Unless you set a record track or output channel, tone is being generated, but not used.

Setting the tone on the recording track and output channel are identical. Perform the following to set the track or channel:

1. Display the ***Disk Mix page*** {**p.42**} or ***Output Mix page*** {**p.47**}.
2. On the far right column (Tone), press the ***matrix*** *button* next to the record track or output channel you want to receive tone. (An **X** appears in the button you pressed.)

Enable the Tone

Tone is enabled by pressing the ***SHIFT*** *key* (⇦) followed by the ***TONE*** *key*. To disable Tone, repeat the sequence again.

Home page Meters

You can display up to sixteen meters (ten on Deva-5.8) on the ***Home page*** {**p.35**}. Each of these meters can be labeled. The label information is stored in the audio file's metadata.

Set the Number of Meters

IMPORTANT: Make sure to have every armed channel displayed on the **Home page** {**p.35**}. It is possible, but not a good idea, to record and mix tracks without displaying its meter.

To adjust the number of meters, display the **Meter Menu page** {**p.67**} and press the ***Number of Home Screen Meters*** *button*. (Every time you press the button, it increments by 1 starting at 4.)

Set the Meter Labels

Meter labels do more than just provide an easy reference of what is on each track when meters are displayed horizontally. This information is saved in the audio file's metadata, it can be used in automated sound reports and is available to Post Production to identify each track. You have 16 characters available.

To change the meter labels, display the **Meter Labels page** {**p.69**} and press one of the ***Meter (#) Label*** *buttons*. Once pressed, that track's label is opened with the **Keyboard page** {**p.135**}, allowing the efficient entry of the label.

NOTE: Use a PDA stylus, external keyboard or the Mix-12 with its built-in keyboard to increase the accuracy and speed of entering labels.

Change the Meter's Appearance

There are several adjustments that can be made to the Deva meters, including their brightness and orientation on the **Home page** {**p.35**}.

Change the Meter Orientation

The orientation can be changed from two different places. If you want to see the new layout as it is selected, use the ***View*** *button*. Otherwise, use the ***Meter Vertical / Horizontal*** *button* on the **Meter Menu page** {**p.67**}. Pressing either button produces exactly the same results, in the same sequence.

Meter Color Schemes

The color scheme can be changed by the pressing the ***Color Theme*** *button* on the **User Interface Settings page** {**p.85**}. The **Bright** and **Black & White** settings are designed for use in full sunlight. Both allow you to see and use the touchscreen when viewing conditions are less than ideal.

Screen Backlight Brightness

The brightness of the screen can be changed by pressing the ***Backlight Brightness*** *button* on the **User Interface Settings page** {**p.85**}.

Monitoring with Headphones

One of the strengths of the Deva is its flexibility in routing, which is evident in the input, output and recording options. This flexibility is extended to the headphone monitoring area as well. Many common headphone-monitoring options come preset from Zaxcom. You can add up to 12 custom presets in addition to the factory presets. Also, you can build a headphone monitoring configuration on-the-fly without saving it, as well as temporarily monitor a single channel. The headphone audio you are listening to is what is being recorded onto the Primary Drive. Checksum Error Correction ensures that what is being sent to the Primary Drive is being recorded there.

There are two shortcuts to getting to the **Headphone Mix page** {**p.75**}:

- Press the ***HEADPHONE*** *key*.
- Press the ***Headphone*** *button* on the **Home page** {**p.35**}.

Both of these immediately bring you to the **Headphone Mix page** {**p.75**}, as long as Fader #8 is not assigned to a track.

Fader #8

Fader #8 serves two purposes on the Deva. When no track is assigned to it, it functions as the headphone volume control. However, when a track is assigned to it, it functions as a normal fader. To adjust the headphone volume when fader #8 is assigned, the **Headphone Volume page** {**p.138**} is used.

To adjust the headphone volume with fader 8 assigned perform the following:

1. Press the ***HEADPHONE*** *key* on the front panel.

2. Use the on-screen fader to adjust the volume.

Load a Factory Preset

To load a factory preset, perform the following:

1. Display the ***Headphone Mix page*** {**p.75**} by pressing:
   - the ***HEADPHONE*** *key* on the front panel, or
   - the ***Headphone*** *button* on the ***Home page*** {**p.35**}, or
   - the ***Head Phone Mix*** *button* on the ***Main Menu page*** {**p.40**}.
2. Press the ***Factory Presets*** *button* on the ***Headphone Mix page*** {**p.75**}.
3. Press one of the ***Preset (#)*** *buttons* on the ***Factory Presets page*** {**p.78**}.

Build Your Own Headphone Mix (Working Preset)

On this page, all armed tracks have **Blue** numbers and all disarmed tracks have **Black** numbers and a **Red** slash through the button.

To build your own headphone mix, perform the following:

- Press the button in the left or right headphone output to assign that headphone output channel. (An **X** is placed in the button.)

Invert Phase

If for some reason, you need to invert the phase on a channel (M/S monitoring, etc), use the ***Phase Invert*** *button* on the appropriate channel(s). (The Deva displays a bar on top of the **X**, indicating the channel's phase is inverted.)

IMPORTANT: Invert Phase only inverts the **playback** phase; it does not affect the recorded audio in any way.

Retaining Your Headphone Mix with a User Preset

In a lot of cases once you have setup monitoring options, you don't need to change them that often. But once changed, the Deva allows you to restore those settings with the press of a button. When stored, these become known as User Presets.

Storing the Mix in a User Preset

You can have up to 12 presets. To store a preset, perform the following:

1. Press the ***User Presets*** *button* on the ***Headphone Mix page*** {**p.75**}.
2. Press the ***Load/Save Toggle*** *button* at the bottom to change the title to **Save User Preset.**
3. Press one of the unassigned ***Preset (#)*** *buttons* on the ***(Load / Save) User Presets page*** {**p.79**}. (The ***Keyboard page*** {**p.135**} is displayed to aid in entering the ***Preset*** *button*'s name.)
4. Enter the name (maximum 8 characters.) and press the ***ENTER*** *key*.

NOTE: The preset name does not immediately appear on the button. However, the next time you go into the ***(Load / Save) User Presets page*** {**p.79**}, the name will appear on the button.

5. Press the ***MENU*** *key* to return to the ***Headphone Mix page*** {**p.75**}. (The preset # and the name you entered appear below the page title.)

The User Preset number and the user entered name also appear on the ***Home page*** {**p.35**} in the ***Headphone*** *button*.

Loading a Mix Saved in a User Preset

To load a preset, perform the following:

1. Press the ***Headphone*** *button* on the ***Home page*** {**p.35**}. (The ***Headphone Mix page*** {**p.75**} is displayed)
2. Press the ***User Presets*** *button* (The ***(Load / Save) User Presets page*** {**p.79**} is displayed.)
3. Press one of the ***Preset (#)*** *buttons* with the preset you want to use. (The LED in the upper left corner turns green.)
4. Press and hold the ***MENU*** *key* until you return to the ***Home page*** {**p.35**}.

Camera Input (Deva-5.8 only)

To switch between listening to the mix and the camera return, press the ***F3*** *key* on the keyboard at any time.

NOTE: The Camera In connector on the Deva-5.8 internally sums the camera return to mono. This summing occurs only on the return audio, not audio sent to the camera.

Timecode page

Settings for the ***Timecode page*** {**p.57**} are project specific. What follows should be considered with a grain of salt!

Timecode Displayed on the Home page

If you need to see the timecode for the start of each Take, for example to log it on a sound report, set the ***Timecode Displayed*** *button* to **Disk**.

If you want to see the current running timecode while in Stop, set the ***Timecode Displayed*** *button* to **Gen Stop**.

Timecode Output

If you just need to send running timecode to another device, set the ***Timecode Out*** *button* to **Generator**.

If you want to control another timecode device with an Auto-Load capability, set the ***Timecode Out*** *button* to **Disk**.

Entering User-bit Data

There are a few themes for entering User-bits, usually determined by what Post wants. Some follow:

- Load the shooting date (e.g. MM:DD:YY:xx, MM:DD:xx:xx) {x = doesn't matter or zero}
- Load the shooting date with the Take # (MM:DD:00:00)
- Load the Take # (00:00:00:00)

If you are storing the date (either MM:DD:YY:xx or DD:MM:YY:xx format) in the user-bits, consider setting the ***Auto JAM Date at Midnight*** *button* on the ***Timecode Run Mode page*** {**p.59**}.

If you want to load some version of the date, assuming the date/time clock is accurate, press the ***JAM Date*** *button*. This will jam the user-bits with the current MM:DD:YY:00. If you want to remove the year bits, press the ***Enter User Bits*** *button* and make the necessary change. A side effect of this is the timecode generator will be jammed with the current real-time clock.

If you want to load **00:00:00:00** at the start of the shoot and you don't have an external clock connected, press the ***JAM U.B.*** *button*. Since there is no user-bit source to jam with, it will load the UB storage with **00:00:00:00**.

To have the user-bits count the Takes, press the ***Increment User Bits*** *button* to change it from **Off** to **On**.

Entering Timecode

Generally, your primary soundcart recorder will be the Master Clock for the set and your timecode will be counting in Free-Run mode, so be sure to set the ***Timecode Run Mode page*** {**p.59**} to **Free Run**.

There are a couple of common themes for entering timecode:

- Enter local real-time – this allows your timecode to indicate when Takes where actually shot.
    - Assuming the local date/time clock is accurate, press the ***JAM Time*** *button*. This will tell the Deva to Jam the TC generator with the current clock time and count from there.
- Enter **00:00:00:00** at the start of the workday – this allows you to see how long you have been working today.
    - If you don't have an external clock connected, press the ***JAM T.C.*** *button*. Since there is no TC source to jam with, it will load the TC generator with **00:00:00:00** and count from there.
    - If you have an external clock connected, set it to **00:00:00:00**.

Frame-rate

To enter a frame, press the ***Frame Rate*** *button* until the desired value is displayed.

Chapter 6 – Using ZaxNet

ZaxNet setup

ZaxNet only requires a hardware connection from the timecode output of the Deva to the timecode input of the IFB100 transmitter. The IFB transmitter must be set to a unique Group ID that matches the Group ID in the wireless transmitters.

Each wireless transmitter in the ZaxNet system must have a unique Unit ID. The Unit ID associates the transmitter with the matching input on the recorder that the receiver for that transmitter is connected to. For example, a receiver that is listening to a transmitter with ID code #4 will be connected to analog input number 4 on the recorder and will be controlled by fader #4 on a Mix-12 or Mix-8. The recorder's analog inputs use Unit IDs 1 – 8 and digital inputs use Unit IDs 9 – 16. If a Deva-16 is being used, line inputs 1 – 4 use Unit IDs 9 – 12.

The transmitter's Group ID must match the IFB100's Group ID. See the Wireless User Manual for the Group ID and Unit ID parameters.

Each wireless transmitter must have a MiniSD card (or MicroSD card, as appropriate) installed and must have the recording option enabled for the ZaxNet system to control the recorder that is integrated into the transmitter.

ZaxNet enable

The ZaxNet signal is embedded in the timecode output of the recorder. Enabling ZaxNet starts the commands flowing to the IFB transmitter through its timecode input.

The ***ZaxNet Enable*** *button* is on the ***ZaxNet Setup page*** {**p.84**}. Turn it "ON" to enable the function.

Slaved / Non-slaved operation

The ***Transport Slaved*** *button* is on the ***ZaxNet Setup page*** {**p.84**}. If the wireless recorder's transport is slaved to the Deva, the wireless record / stop function will be in sync with the Deva. This is desirable if Actor privacy is the most important concern. If the wireless transport is not slaved to the Deva, the wireless will be in record mode all of the time. This is the safest way to use ZaxNet as the wireless will back up the audio even if the Deva does not go into record. If the system is not slaved, the IFB transmitter must be used to restart wireless recording if the wireless is required to replay audio. If the slave mode is enabled, the wireless will go into record each time the Deva goes into record.

Note that the IFB100's ***Pacifier*** *page* has 4 transport modes selectable by the ***UP*** or ***DOWN*** *key*: PLAY, STOP, REC and "----". The "----" mode allows the TRX and/or Deva to adjust the transport mode in whatever way might be appropriate. Otherwise the IFB will try to force a specific transport mode. When forcing the units to go back into record after a ZaxNet playback operation, pressing the ***UP*** *key* forces the units into record while pressing the ***DOWN*** *key* restores the IFB to its default state of "----".

Transmitter gain setup

The microphone pre-amp gain of the TRX series transmitters can be remotely controlled from either the recorder's faders or from the trim knobs on the Mix-12 or Mix-8.

To control the wireless gain from the trim knobs on the Mix-12 or Mix-8, enter the ***Input Configure page (Analog Inputs selected)*** {**p.87**} and select one of the analog or digital channels. The ***Mix12 Input Trim Select*** *button* selects whether the trim knob on the mixer controls the transmitter input gain (**Tx ZaxNet**) or the Deva pre-amp for the channel (**Normal**):

- **Tx ZaxNet** – the on-screen graphic trim pot in the ***Analog Input (#) page*** {**p.89**} controls the recorder's pre-amp for the associated channel, the Mix-12 trim knob for the channel controls the transmitter's pre-amp for the channel and the Mix-12 linear fader controls the channel's contribution to the recording channel's level.
- **Normal** – ZaxNet is not enabled for this channel and the wireless kit associated with it, if any.

To control the transmitter's pre-amp gain from the recorder's faders, select the ***Faders page*** {**p.54**}. Then select the ***Fader Assign*** *button*. Press the ***(Fader / ZaxNet Trim)*** *button* to change it to **ZaxNet Trim**. Pressing a cross-point will route the transmitter's pre-amp gain to the hardware fader on the recorder. Any hardware fader can control any of the transmitters. Multiple transmitters can be assigned to a single pot. Master faders are not allowed in this mode.

A transmitter cannot be assigned to a recorder's fader and a Mix-12 / Mix-8 fader at the same time. The last assignment will automatically disable the assignment from the other device.

If the transmitter gain is under remote control it cannot be controlled locally until the wireless transmitter is out of range of the IFB signal, the IFB signal is shut down or the recorder is on the ***Timecode page*** {**p.57**}.

NOTE: Once the transmitter comes back into range, the current remote gain setting will once again take effect.

Wireless Audition & Wireless Re-Record

Each wireless transmitter will replay from its memory card, based on the timecode and user-bits recorded with the Take. Be sure to change the user-bits each day so that the audio files do not contain the same user-bits on different days.

When a segment is cued in the ***Cue Mode page*** {**p.127**}, the timecode and user-bits are automatically transferred to the wireless cue buffer so the wireless system knows where to locate the audio on the wireless memory card.

The ***Cue Mode*** *page* contains the ***Cue Toggle*** *button*. Pressing this button once opens the ***Wireless*** *view*, pressing it again reopens the ***Recorder*** *view*.

The ***Recorder*** *view* is used to replay the audio from the Deva's local drive.

The ***Wireless*** *view* is used to replay the audio from the wireless system (Wireless Audition) and to re-broadcast and re-record the audio stored on the wireless transmitters (Wireless Re-Record).

If timecode and user-bits are manually entered in the ***Wireless*** *view*, the wireless will cue to the exact location entered, provided the timecode location exists in the available audio files. This direct entry of timecode and user-bits will remain active until a segment is entered in the ***Cue Mode*** *page*.

Pressing the ***Wireless Audition*** *button* in the ***Wireless*** *view* will cause each transmitter to replay the audio in its memory card. The audio will replay in sync from all of the transmitters that were used during the original recording. The recorder's ***STOP*** *key* must be pressed to manually stop the playback from the transmitters. The transmitters will continue to play into the next segment until the end of the last segment available is reached.

Pressing the ***Wireless ReRec*** *button* in the ***Wireless*** *view* will cause each transmitter to playback the audio in its memory card. The Deva will go into record mode and will re-record the tracks as if they were being recorded live. A note in the new file will be automatically generated to indicate the timecode offset that should be entered into the telecine controller in Post to play the re-recorded file.

The audio will replay in sync from all of the transmitters that were used during the original recording. The recorder's ***STOP*** *key* must be pressed to manually stop the playback from the transmitters and to stop the Re-Record process on the recorder. The transmitters will continue to play into the next segment and the recorder will continue to record until the end of the last segment is reached.

Chapter 7 – New System Capabilities

Introduction

Our Software Engineers make changes to the firmware to make it easier to use or to correct a problem that an Operator has encountered. But, every once-in-a-while, they come up with some truly ground-breaking additions to the system. This chapter is dedicated to letting all of you, the Owners and Operators, know about all of these new capabilities. As part of that, I will do my best to explain how to use them.

Improvements

Power Roll feature

When was it introduced:

Deva/Fusion	TRX & IFB100	QRX-IFB
v7.46 (2011-06-20)	v7.35 (2011-06-20)	v1.36 (2011-05-10)

Deva and Fusion can now send the Power Roll state with its timecode through an attached IFB100 or QRX-IFB. The **POWER ROLL** parameter setting has the following effects:

- **ALWAYS HIGH** – send a HIGH POWER state at all times.
- **ALWAYS LOW** – send a LOW POWER state at all times.
- **POWER ROLL** – send a LOW POWER state while in STOP mode and a HIGH POWER state while in RECORD or PLAYBACK mode.

The **ALLOW POWER ROLL** parameter (in the TRXxxx) determines what effect (if any), the Power Roll state has:

- **OFF** – the Power Roll state is ignored
- **RECORD TRIGGER** – when the unit goes into RECORD mode, the transmit power is set to 120 mW and when it goes into STOP mode, the transmit power is set to its local power setting.
- **DEVA TRIGGER** – the Power Roll state determines the transmit power.

Folder Recovery function

When was it introduced:

Deva/Fusion
v6.06C (2009-06-26)

Boot up while pressing the F6 key (***INPUT*** *key*). Once the system has settled down, go to the folder that was recovered and press the ***REC*** *key*, wait 5 seconds and press the ***STOP*** *key*. This causes the recovered data to be written to the drive.

New Processor Speed Selection feature

When was it introduced:

Deva/Fusion
v5.42U (2008-07-11)

DSP boards labeled REVB in the ***About Deva page*** {**p.134**} might not be able to run reliably at the high processor speed.

Type **036** in the ***Main Menu page*** {**p.40**} and display the ***Deva Service Menu Warning page*** {**p.140**}. There is a new ***Processor Speed*** *button*. If the processor speed is set to **HIGH**, the ***192000*** *button* in the ***Sample Rate page*** {**p.62**} should remain enabled. If not, the ***9*** *key* must be held during power up in order to allow 192 kHz recording.

The higher speed will increase the mirroring speed by about 20% and will allow the user to enable more effects before the screen becomes sluggish.

NOTE: Older Devas may NOT run reliability at the higher processor speed.

Saving and restoring Deva's configuration INI files

When was it introduced:

Deva/Fusion
v5.14 (2008-04-22)

The Export Settings feature was added to allow Users to save and restore all their settings to or from any (FAT32 formatted) mirror disk.

To save the current configuration settings to a CF card:

1. Turn **Off** mirroring and insert a formatted mirror disk or card.
2. Go to the ***Main Menu page*** {**p.40**} and type **1967** to display the ***Debug Screen dialog box*** {**p.141**}.
3. Press the ***TRIM*** *key* then the ***5*** *key*. This will copy your configuration memory files to the mirror disk.

To load configuration settings from a CF card:

1. Turn **Off** mirroring and insert a mirror disk or card containing the INI files to be loaded.
2. Go to the ***Main Menu page*** {**p.40**} and type **1967** to display the ***Debug Screen dialog box*** {**p.141**}.
3. Press the ***TRIM*** *key* then the ***4*** *key*. This will load the INI files into the unit's configuration memory.

Simultaneous Mirror feature

When was it introduced:

Deva
v4.00

Go to the ***Mirror Drive page*** {**p.120**} and change the ***Mirror Mode*** *button* to **On-CONTIN.** to enable the continuous mirror mode. Deva will mirror the currently selected mirror folder while in record (not during playback). When mirroring more than 8 tracks at 48 kHz, Deva may slowly fall behind the mirror process and may take a few minutes to catch up after the recording stops.

"Mirror All Folders" feature

When was it introduced:

Deva
v3.69

Erase your mirror drive (FireWire hard drive) and then select a starting folder in the ***Mirror Folders page*** {**p.125**}. Press the ***Mirroring Mode*** *button* to select **All Folders**. Then go back to the ***Mirror Drive page*** {**p.120**} and change the ***Mirror Mode*** *button* to **On-NORMAL** to start mirroring. The Deva will mirror starting at the currently selected mirror folder and will mirror all folders until the end of the disk. Deva will over-write any matching segments that are already on the mirror disk.

Known Firmware Issues

NOTE: Turn 'OFF' all effects before switching to a higher sampling-rate. If you want to use 192 kHz mode, then you should perform a factory restore defaults to insure all effects are turned 'OFF'.

When changing from 192 kHz to 48 kHz sample-rate, select 96 kHz first as an intermediate step to prevent a possible freeze. Holding the ***0*** *key* while booting will force the Deva back into 48 kHz mode.

NOTE: Mirror Disk Playback must **NOT** be enabled while mirror mode is on. Doing so will cause the unit to appear to be in playback when it is not. The ***Play*** *key* may not update properly until the current page is exited.

NOTE: Playback from a DVD-RAM disk or FireWire drive often will not be fast enough to sustain the Deva's playback buffer. This will often result in only partial playback of a file. Press the ***STOP*** *key* periodically to allow the playback buffer to refill.

WARNING: If you install software versions lower than z3.55 onto a Deva, the internal DVD drive and CF card slot will not function. This may make it difficult to install a newer version.

NOTE: As of V4.00, you must select the folder to mirror. Deva will no longer assume that you want to mirror the current RECORD folder. You may also change the RECORD folder without affecting the currently mirroring folder.

Chapter 8 – Shortcut Keys

CAUTION: Be very careful to mark a Take as a **False Start** only once. If you should mark it more than once, each additional marking will cause that number of following Takes to also be marked as a **False Start**.
For example: If you mark the last Take as a False Start 3 times, that Take and the following 2 Takes will all be marked as **False Starts**.

Common Data Entry Field Shortcuts List

Keyboard Keys

- ***HOME*** *key* – moves the cursor to the first character in the field.
- ***END*** *key* – moves the cursor to the last character in the field.
- ***LEFT / RIGHT ARROW*** *keys* – move the cursor left / right.
- ***ESC*** *key* – discards unsaved changes and closes the data entry field.
- ***DEL*** *key* – deletes the character at the cursor and left shifts all characters on the right side of the cursor.
- ***INS*** *key* – moves the cursor to the first character in the field.
- ***ENTER*** *key* – accepts the data, validates it and closes the data entry field.
- ***TAB*** *key* – same as ***ENTER*** *key*
- ***BACKSPACE*** *key* – 1) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  2) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  3) If the cursor is on the first character, it has no effect.

Front Panel Keys

- ***SHIFT / BACKSPACE*** *key* – deletes one character at the cursor and moves the cursor to the left one character.
- ***MENU / ESC*** *key* – functions as the ***ESC*** *key* by discarding unsaved changes and closing the data entry field.
- ***ENTER*** *key* – accepts the data, validates it and closes the data entry field.

Common Keyboard page Shortcuts List

- ***HOME*** *key* – moves the cursor to the first character in the field.
- ***END*** *key* – moves the cursor to the last character in the field.
- ***LEFT / RIGHT ARROW*** *keys* – move the cursor left / right.
- ***ESC*** *key* – discards unsaved changes and closes the data entry field.
- ***DEL*** *key* – deletes the character at the cursor and left shifts all characters on the right side of the cursor.
- ***INS*** *key* – moves the cursor to the first character in the field.
- ***ENTER*** *key* – accepts the data, validates it and closes the data entry field.
- ***TAB*** *key* – same as ***ENTER*** *key* but, advances to the next text field (Scene, Take, Note).
- ***BACKSPACE*** *key* – 1) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  2) If the cursor is not on the first or last character, it deletes the character to the left of the cursor, moves the cursor to the left one character and left shifts the characters on the right of the deleted character by one character.
  3) If the cursor is on the first character, it deletes the character at the cursor and moves the characters right of the cursor to the left one character.

Front Panel Shortcuts

- ***ENTER*** *key* – (hold for 2 seconds) Lock the touchscreen.
  - ***MENU*** *key* – press to unlock the touchscreen.
- ***F1*** *key* – displays the ***Cue Mode page*** {**p.127**}.
- ***F2*** *key* – flags the currently displayed Take as a "CIRCLE TAKE".
- ***F3*** *key* – (first press) displays the ***False Start dialog*** {**p.139**}.
  (second press) closes the ***False Start dialog*** without doing anything to the dialog.
- ***F4*** *key* – (first press) displays the ***Timecode page*** {**p.57**}.

(second press) displays the ***Timecode Diagnostics page***.

- ***F5*** *key* – go to **[Scene Take Note page](#)** {**p.131**}.
- ***F6*** *key* – (first press, if Fader-8 assigned) displays the **[Headphone Volume page](#)** {**p.138**}.
  (next press) displays the **[Headphone Mix page](#)** {**p.75**}.
  (next press) return to previously displayed page.
- Pressing a ***Recording*** channel for about 2 seconds – solos that channel to the headphones, the ***Headphone*** *button* displays **SOLO**, the left and right headphone channels display the solo'd track and the other track audio bars are grayed out.
  - Pressing any other track SOLOs that track. The left and right headphone channels display the solo'd track's #.
  - Pressing the ***Headphone*** *button*, cancels the SOLO.
- ***SHIFT*** *key*+***Recording*** channel – arms / disarms the track that was touched. A disarmed track has a line through it long wise and the bar indicating the audio level changes to **Blue**.
- ***0*** – ***9*** *keys* – displays the **[Enter Segment data entry field](#)**, {**p.37**}. Type the remainder of the number and press the ***ENTER*** *key*. Once entered, the system attempts to move to the day's recording, by the segment # entered. If the number entered is too high, the last available segment is displayed.
  - ***SHIFT / BACKSPACE*** *key* – deletes one character at the cursor and moves the cursor to the left one character.
  - ***MENU / ESC*** *key* – functions as the ***ESC*** *key* by discarding unsaved changes and closing the data entry field.
  - ***ENTER*** *key* – accepts the data, validates it and closes the data entry field.

Mix-12 Embedded Keyboard Shortcuts

- ***ESC*** *key* – same as pressing the ***MENU*** *key*.
- ***F1*** *key* – displays the **[Cue Mode page](#)** {**p.127**}.
- ***F2*** *key* – flags the currently displayed Take as a "CIRCLE TAKE".
- ***F3*** *key* – (first press) displays the **[False Start dialog](#)** {**p.139**}.
  (second press) closes the ***False Start dialog*** without doing anything to the dialog.
- ***F4*** *key* – (first press) displays the **[Timecode page](#)** {**p.57**}.
  (second press) displays the ***Timecode Diagnostics page***.
- ***F5*** *key* – go to **[Scene Take Note page](#)** {**p.131**}.
- ***F6*** *key* – (first press, if Fader-8 assigned) displays the **[Headphone Volume page](#)** {**p.138**}.
  (next press) displays the **[Headphone Mix page](#)** {**p.75**}.
  (next press) return to previously displayed page.
- ***F7*** *key* – displays the **[Meter Labels page](#)** {**p.69**}.
- ***F8*** *key* – edit the ***Scene*** *button* in the **[Scene Take Note page](#)** {**p.131**}.
- ***F9*** *key* – edit the ***Take*** *button* in the **[Scene Take Note page](#)** {**p.131**}.
- ***F10*** *key* – edit the **Note** *button* in the **[Scene Take Note page](#)** {**p.131**}.
- ***0*** – ***9*** *keys* – displays the **[Enter Segment data entry field](#)**, {**p.37**}. Type the remainder of the number and press the ***ENTER*** *key*. Once entered, the system attempts to move to the day's recording, by the segment # entered. If the number entered is too high, the last available segment is displayed.
- ***M*** *key* – toggle Mix-12 meters between prefader input level and the disk mix.
- ***Arrow*** *keys* – navigation in pages.
- ***CRTL*** *key* & single digit – opens the label for the associated channel for modification. Correct the existing label or enter a new one from scratch. While a meter is being edited it will not update.
  - See: **[Common Data Entry Field Shortcuts List](#)** {**p.159**}, with the following exception(s):
    - ***BACKSPACE*** *key* –
      1) If the cursor is on the last character, it deletes the character to the left of the cursor and moves the cursor and character 1 position to the left.
      2) If the cursor is not on the first or last character, it deletes the character to the left of the cursor and shifts all characters from the cursor to the end of the text right 1 character.
      3) If the cursor is on the first character, it deletes the character at the cursor and shifts all characters from the next character to the end of the text right 1 character.

Attached Keyboard Shortcuts

- ***ESC*** *key* – same as pressing the ***MENU*** *key*.
- ***F1*** *key* – displays the **[Cue Mode page](#)** {**p.127**}.
- ***F2*** *key* – flags the currently displayed Take as a "CIRCLE TAKE".

- ***F3*** *key* – (first press) displays the ***False Start dialog*** {**p.139**}.
  (second press) closes the ***False Start dialog*** without doing anything to the dialog.
- ***F4*** *key* – (first press) displays the ***Timecode page*** {**p.57**}.
  (second press) displays the ***Timecode Diagnostics page***.
- ***F5*** *key* – displays the ***Scene Take Note page*** {**p.131**}.
- ***F6*** *key* – (first press, if Fader-8 assigned) displays the ***Headphone Volume page*** {**p.138**}.
  (next press) displays the ***Headphone Mix page*** {**p.75**}.
  (next press) return to previously displayed page.
- ***F7*** *key* – displays the ***Meter Labels page*** {**p.69**}.
- ***F8*** *key* – edit the ***Scene*** *button* in the ***Scene Take Note page*** {**p.131**}.
- ***F9*** *key* – edit the ***Take*** *button* in the ***Scene Take Note page*** {**p.131**}.
- ***F10*** *key* – edit the **Note** *button* in the ***Scene Take Note page*** {**p.131**}.
- ***INS*** *key* – displays the ***Home page*** {**p.35**} from anywhere.
- ***0 – 9*** *keys* – displays the ***Enter Segment data entry field***, {**p.37**}. Type the remainder of the number and press the ***ENTER*** *key*. Once entered, the system attempts to move to the day's recording, by the segment # entered. If the number entered is too high, the last available segment is displayed.
- ***M*** *key* – toggle Mix-12 meters between prefader input level and the disk mix.
- ***Arrow*** *keys* – navigation in pages.

Boot-up Shortcuts

Page Level Shortcuts

- ***MENU*** *key* – Press and hold it to pause the startup sequence until you release it, allowing you to read all of the information.

Boot Keys

Hold down one of the following keys during bootup to change the Deva's behavior:

- ***F6*** *key* – causes the Deva (v6.06C or later) to reconstruct corrupted folders. This should allow folders to be mirrored in a normal way.
- ***0*** *key* – forces 48 kHz mode (in v3.56 and later) (also forces Deva to read corrupted folders).
- ***9*** *key* – enables 192 kHz recording speed. This is somewhat obsolete. The current approach is to run the DSP in fast mode and enable the 192 kHz selection.
- ***STOP*** *key* – forces a factory restore to defaults.

Home page Shortcuts

Using the Deva front panel:

- ***ENTER*** *key* – (hold for 1 second) Lock the touchscreen.
  - ***MENU*** *key* – press to unlock the touchscreen.
- ***F1*** *key* – go to the ***Cue Mode page*** {**p.127**}.
- ***F2*** *key* – flags the currently displayed Take as a "CIRCLE TAKE".
- ***F3*** *key* – (first press) displays the ***False Start dialog*** {**p.139**}.
  (second press) closes the ***False Start dialog*** without doing anything to the dialog.
- ***F4*** *key* – (first press) go to ***Timecode page*** {**p.57**}.
  (second press) go to the ***Timecode Diagnostics page***.
- ***F5*** *key* – go to ***Scene Take Note page*** {**p.131**}.
- ***F6*** *key* – (first press, if Fader-8 assigned) go to ***Headphone Volume page*** {**p.138**}.
  (next press) go to ***Headphone Mix page*** {**p.75**}.
  (next press) return to previously displayed page.
- Pressing a ***Recording*** channel for about 2 seconds – solos that channel to the headphones, the ***Headphone*** *button* displays **SOLO**, the left and right headphone channels display the solo'd track and the other track audio bars are grayed out.
  - Pressing any other track SOLOs that track. The left and right headphone channels display the solo'd track's #.
  - Pressing the ***Headphone*** *button*, cancels the SOLO.
- ***ENTER*** *key* – (press for about 2 seconds) to lock the touchscreen (press the ***MENU*** *key* to unlock).
- ***SHIFT*** *key*+***Recording*** channel – arms / disarms the track that was touched. A disarmed track has a line through it long wise and the bar indicating the audio level changes to **Blue**.

- ***0** – **9** keys* – displays the [***Enter Segment data entry field***], {**p.37**}. Type the remainder of the number and press the ***ENTER*** *key*. Once entered, the system attempts to move to the day's recording, by the segment # entered. If the number entered is too high, the last available segment is displayed.
  - ***SHIFT / BACKSPACE*** *key* – deletes one character at the cursor and moves the cursor to the left one character.
  - ***MENU / ESC*** *key* – functions as the ***ESC*** *key* by discarding unsaved changes and closing the data entry field.
  - ***ENTER*** *key* – accepts the data, validates it and closes the data entry field.

Using the Mix-12 embedded keyboard:

- ***ESC*** *key* – Same as the ***MENU*** *key*.
- ***F1*** *key* – go to the ***Cue Mode page*** {**p.127**}.
- ***F2*** *key* – flags the currently displayed Take as a "CIRCLE TAKE".
- ***F3*** *key* – (first press) displays the ***False Start dialog*** {**p.139**}.
  (second press) closes the ***False Start dialog*** without doing anything to the dialog.
- ***F4*** *key* – (first press) go to ***Timecode page*** {**p.57**}.
  (second press) go to the ***Timecode Diagnostics page***.
- ***F5*** *key* – go to ***Scene Take Note page*** {**p.131**}.
- ***F6*** *key* – (first press, if Fader-8 assigned) go to ***Headphone Volume page*** {**p.138**}.
  (next press) go to ***Headphone Mix page*** {**p.75**}.
  (next press) return to previously displayed page.
- ***F7*** *key* – go to ***Meter Labels page*** {**p.69**}.
- ***F8*** *key* – edit the ***Scene*** *button* in the ***Scene Take Note page*** {**p.131**}.
- ***F9*** *key* – edit the ***Take*** *button* in the ***Scene Take Note page*** {**p.131**}.
- ***F10*** *key* – edit the ***Note*** *button* in the ***Scene Take Note page*** {**p.131**}.
- ***0** – **9** keys* – displays the ***Enter Segment data entry field***, {**p.37**}. Type the remainder of the number and press the ***ENTER*** *key*. Once entered, the system attempts to move to the day's recording, by the segment # entered. If the number entered is too high, the last available segment is displayed.
- ***M*** *key* – toggle Mix-12 meters between prefader input level and the disk mix.
- ***Arrow*** *keys* – navigation in pages.
- ***CRTL*** *key* & single digit – opens the label for the associated channel for modification. Correct the existing label or enter a new one from scratch. While a meter is being edited it will not update.
  - See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exception(s):
    - ***BACKSPACE*** *key* – 1) If the cursor is on the last character, it deletes the character to the left of the cursor and moves the cursor and character 1 position to the left.
      2) If the cursor is not on the first or last character, it deletes the character to the left of the cursor and shifts all characters from the cursor to the end of the text right 1 character.
      3) If the cursor is on the first character, it deletes the character at the cursor and shifts all characters from the next character to the end of the text right 1 character.

Using an attached keyboard:

- ***ESC*** *key* – same as pressing the ***MENU*** *key*.
- ***F1*** *key* – go to the ***Cue Mode page*** {**p.127**}.
- ***F2*** *key* – flags the currently displayed Take as a "CIRCLE TAKE".
- ***F3*** *key* – (first press) displays the ***False Start dialog*** {**p.139**}.
  (second press) closes the ***False Start dialog*** without doing anything to the dialog.
- ***F4*** *key* – (first press) go to ***Timecode page*** {**p.57**}.
  (second press) go to the ***Timecode Diagnostics page***.
- ***F5*** *key* – go to ***Scene Take Note page*** {**p.131**}.
- ***F6*** *key* – (first press, if Fader-8 assigned) go to ***Headphone Volume page*** {**p.138**}.
  (next press) go to ***Headphone Mix page*** {**p.75**}.
  (next press) return to previously displayed page.
- ***F7*** *key* – go to ***Meter Labels page*** {**p.69**}.
- ***F8*** *key* – edit the ***Scene*** *button* in the ***Scene Take Note page*** {**p.131**}.
- ***F9*** *key* – edit the ***Take*** *button* in the ***Scene Take Note page*** {**p.131**}.
- ***F10*** *key* – edit the ***Note*** *button* in the ***Scene Take Note page*** {**p.131**}.
- ***INS*** *key* – go to the ***Home page*** {**p.35**} from anywhere.

- ***0** – **9** keys* – displays the ***Enter Segment data entry field***, {**p.37**}. Type the remainder of the number and press the ***ENTER** key*. Once entered, the system attempts to move to the day's recording, by the segment # entered. If the number entered is too high, the last available segment is displayed.
- ***M** key* – toggle Mix-12 meters between prefader input level and the disk mix.
- ***Arrow** keys* – navigation in pages.

Disk Limiter Settings page Shortcuts

- ***UP / DOWN ARROW** keys* – navigate through the left hand column of buttons.
- ***0** – **9** keys* – navigate to view the level of the appropriate channel (0 = 10).

Output Limiter Settings page Shortcuts

- ***UP / DOWN ARROW** keys* – navigate through the left hand column of buttons.
- ***1** – **8** keys* – navigate to view the level of the appropriate channel.

Attack button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exception(s):

- ***BACKSPACE** key* –
  1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Decay button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

Thresh button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exception(s):

- ***BACKSPACE** key* –
  1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Ratio button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

- ***BACKSPACE** key* –
  1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Gain button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exception(s):

- ***BACKSPACE** key* –
  1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Timecode page Shortcuts

Enter Timecode button Shortcuts

- See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

Enter User Bits button Shortcuts

- ***0*** – ***9***, ***A*** – ***F*** *keys* – keys to enter data.
- See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exception(s):
  - **F1 – F6** *keys* – are mapped to the hex letters A – F.

Meter Labels page Shortcuts

- ***0 – 9*** *keys* – displays the ***Keyboard page*** {**p.135**} for entry of the label text.

Meter (#) Label buttons Shortcuts

- See: ***Common Keyboard page Shortcuts*** {**p.159**}, with the following exception(s):
  - ***TAB*** *key* – advances the data entry field to the next label in sequence.

Time/Date page Shortcuts

Set Time button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exceptions:

- ***LEFT / RIGHT ARROW*** *keys* – do not have any effect
- ***BACKSPACE*** *key* – The cursor moves left without deleting any characters.

Set Date button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}, with the following exceptions:

- ***LEFT / RIGHT ARROW*** *keys* – do not have any effect
- ***BACKSPACE*** *key* – The cursor moves left without deleting any characters.

Input Configure page Shortcuts

- ***1*** – ***8*** *keys* – equivalent to pressing the appropriate ***Analog (#)*** *buttons*, changes to the ***Analog Input (#) page*** {**p.89**} for the selected channel.

High Pass (#) Hz button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

(Analog / Digital / LineLvl) Input (#) page Shortcuts

- ***1*** – ***8*** *keys* – the same as clicking on analog channel buttons 1 – 8.
- ***D*** *key* – goes to the ***Analog Input (#) – Dynamics page*** {**p.91**} for the current channel.
- ***E*** *key* – goes to the ***Analog Input (#) – EQ page*** {**p.94**} for the current channel. This functions the same as the ***EQ*** *key* on the Mix-12.
- ***B*** *key* – goes to the ***Analog Input (#) – BUS page*** {**p.97**} for the current channel. This functions the same as the ***BUS*** *key* on the Mix-12.

Delay button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

HPF button Shortcuts

See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

(Analog / Digital) Input (#) – Dynamics page Shortcuts

- ***1*** – ***8*** *keys* – the same as clicking on analog channel buttons 1 – 8.
- ***ENTER*** *key* – toggles the compressor on / off
- ***UP or DOWN ARROW*** *key* (keyboard) – cycles through the compressor buttons.
- ***2 or 8*** *key* (front panel) – cycles through the compressor buttons.

Attack button Shortcuts

Clicking the button the first time selects it. This allows the value to be modified by the ***Inc*** *button* and ***Dec*** *button*. Clicking it a second time opens it for direct access.
See: ***Common Data Entry Field Shortcuts List*** {**p.159**}

Decay button Shortcuts

Clicking the button the first time selects it. This allows the value to be modified by the ***Inc*** *button* and ***Dec*** *button*.

Clicking it a second time opens it for direct access.
See: Common Data Entry Field Shortcuts List {p.159}

Thresh button Shortcuts

Clicking the button the first time selects it. This allows the value to be modified by the ***Inc*** *button* and ***Dec*** *button*. Clicking it a second time opens it for direct access.
See: Common Data Entry Field Shortcuts List {p.159}, with the following exception(s):

- ***BACKSPACE*** *key* – 1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Ratio button Shortcuts

Clicking the button the first time selects it. This allows the value to be modified by the ***Inc*** *button* and ***Dec*** *button*. Clicking it a second time opens it for direct access.
See: Common Data Entry Field Shortcuts List {p.159}

Gain button Shortcuts

Clicking the button the first time selects it. This allows the value to be modified by the ***Inc*** *button* and ***Dec*** *button*. Clicking it a second time opens it for direct access.
See: Common Data Entry Field Shortcuts List {p.159}, with the following exception(s):

- ***BACKSPACE*** *key* – 1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

(*Analog / Digital*) *Input (#) – EQ page Shortcuts*

- ***ENTER*** *key* – alternately enables (inline) and disables (bypassed) ALL EQ settings for the current channel. When a channel's EQ has been bypassed, the settings are still maintained until they are specifically modified.
- ***RIGHT ARROW*** *key* – advances to the next filter band (note the green light in the buttons on the bottom of the page).
- ***LEFT ARROW*** *key* – advances to the previous filter band.
- ***UP ARROW*** *key* – changes the current band's filter type:
  - Band 1 – 3 are band filters selectable as **Lo Shelf**, **Hi Shelf**, **Peaking** or **Off**.
  - Notch 1 & 2 are notch filters selectable as **Off** or **On**.
- ***U*** *key* – resets the ***Level*** *field* of all bands of the current channel to unity (0.0), effectively negating them.
- ***L*** *key* – changes focus to the ***Level*** *field*.
- ***F*** *key* – changes focus to the ***Freq*** *field*.
- ***Q*** *key* – changes focus to the ***Q*** *field*.
- ***E*** *key* – advances to the ***EQ Memory*** *view*.
- ***R*** *key* – resets the ***Level*** *field*, ***Freq*** *field* and ***Q*** *field*.
- ***BACKSPACE*** *key* – advances to the ***EQ Memory*** *view*.

While the ***Entry Mode*** *button* is set to **LVL/FREQ**, the following keys are active:

- ***2*** *key* – adds 0.4 to the ***Level*** *field*.
- ***8*** *key* – subtracts 0.4 from the ***Level*** *field*.
- ***6*** *key* – adds 200 to the ***Freq*** *field*.
- ***4*** *key* – subtracts 200 from the ***Freq*** *field*.

Level field Shortcuts

See: Common Data Entry Field Shortcuts List {p.159}, with the following exception(s):

- ***BACKSPACE*** *key* – 1) The first time the backspace is pressed it enters a decimal point.

2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
4) If the cursor is on the first character, it has no effect.

Freq field Shortcuts

See: Common Data Entry Field Shortcuts List {p.159}

Q field Shortcuts

See: Common Data Entry Field Shortcuts List {p.159}, with the following exception(s):

- ***BACKSPACE** key* – 1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

EQ Memory view Shortcuts

- ***1 – 5** keys* – pressing one of them loads / saves (depending on the mode) in the respective memory.
- ***E** key* – exits the **EQ** *page* and returns to the ***Analog Input (#) page*** {**p.89**} for this channel.
- ***BACKSPACE** key* – returns to the **EQ** *page*.

(Analog / Digital) Input (#) – BUS page Shortcuts

- ***LEFT** / **RIGHT ARROW** keys* – select which bus (Disk Channel vs. Output Channel)
- ***1 – 9** and **0** keys* – cycles cross-points
- ***E** key* – exits the ***BUS** page* and returns to the ***Analog Input (#) page*** {**p.89**} for this channel

(Analog / Digital) Input Delay page Shortcuts

0 – 9** keys* – opens the data entry field for the currently selected (highlighted) button (see ***Enter Delay** button **Shortcuts). Type the remainder of the number.

Enter Delay button Shortcuts

See: Common Data Entry Field Shortcuts List {p.159}

Disk Folders page Shortcuts

None

Name Folder button Shortcuts

See: Common Keyboard page Shortcuts {p.159}.

Folder "???" Contents page Shortcuts

None

Enter Seg # button Shortcuts

See: Common Data Entry Field Shortcuts List {p.159}

Mirror Drive page Shortcuts

- Typing a number opens a ***Segment number** data entry field*. Once entered, the system enters it as the ***Start Seg** button*'s data.
- Typing a second number opens a second ***Segment number** data entry field*. Once entered, the system enters it as the ***End Seg** button*'s data.

Start Seg field Shortcuts

See: Common Data Entry Field Shortcuts List {p.159}

End Seg field Shortcuts

See: Common Data Entry Field Shortcuts List {p.159}

Cue Mode page Shortcuts

- ***0** – **9** keys* – displays the ***Enter Segment** data entry field*. Type the remainder of the number and press the ***ENTER** key*. Once entered, the system attempts to move to the day's recording, by the segment # entered. If the number entered is too high, the last available segment is displayed.

Enter Segment data entry field Shortcuts

See: Common Data Entry Field Shortcuts List {**p.159**}

Scene Take Note page Shortcuts

- ***0** – **9** keys* – displays the ***Enter Segment** data entry field*. Type the remainder of the number and press the ***ENTER** key*. Once entered, the system attempts to move to the day's recording, by the segment # entered. If the number entered is too high, the segment **NEXT** is displayed.
- ***LEFT** / **RIGHT ARROW** keys* – navigates from the current recording segment to the previous / next segment.
- ***UP / DOWN ARROW** keys* – scrolls up / down through the stored notes in the bottom of the screen.
- ***CTRL** key* + single digit – inserts the stored note associated with the number into the current ***Note** button*.
- ***CTRL** key* + ***SHIFT** key* + single digit – inserts the stored note associated with the number into the current ***Note** button*.
- ***ALT** key* & single digit – stores the current ***Note** button* into the specified stored note.
- ***ALT** key* & ***SHIFT** key* & single digit – stores the current ***Note** button* into the specified stored note.
- ***F8** key* – opens the ***Scene** button*.
- ***F9** key* – opens the ***Take** button*.
- ***F10** key* – opens the ***Note** button*.

Enter Segment data entry field Shortcuts

See: Common Data Entry Field Shortcuts List {**p.159**}

Scene button Shortcuts

See: Common Keyboard page Shortcuts List {**p.159**}, with the following exception(s):

- ***TAB** key* – jumps to the ***Take** button* for data entry.

Take button Shortcuts

See: Common Keyboard page Shortcuts List {**p.159**}, with the following exception(s):

- ***TAB** key* – jumps to the ***Note** button* for data entry.

Note button Shortcuts

See: Common Keyboard page Shortcuts List {**p.159**}, with the following exception(s):

- ***TAB** key* – jumps to the ***Scene** button* for data entry.

Segment button Shortcuts

See: Common Data Entry Field Shortcuts List {**p.159**}

Battery Menu page Shortcuts

None

Low Battery Voltage button Shortcuts

See: Common Data Entry Field Shortcuts List {**p.159**}, with the following exception(s):

- ***BACKSPACE** key* –
  1) The first time the backspace is pressed it enters a decimal point.
  2) If the cursor is on the last character, it deletes the character at the cursor and moves the cursor left one character.
  3) If the cursor is not on the first or last character, it moves the cursor left one position, without deleting the character.
  4) If the cursor is on the first character, it has no effect.

Headphone Volume page Shortcuts

- ***LEFT ARROW** key* – decreases the headphone volume by ~**4 dB**.
- ***UP ARROW** key* – decreases the headphone volume by ~**4 dB**.
- ***RIGHT ARROW** key* – increases the headphone volume by ~**4 dB**.
- ***DOWN ARROW** key* – increases the headphone volume by ~**4 dB**.

Debug Screen (1967) page Shortcuts

Here is a summary of the ***F5** key* commands in the ***Debug Screen dialog box*** {**p.141**}:

- ***F5** key* then ***1*** – Restart the Deva. This can help some FireWire devices mount properly.
- ***F5** key* then ***4*** – **NEW** – Import settings (INI files) FROM the Mirror Drive.
- ***F5** key* then ***5*** – **NEW** – Export settings TO the Mirror Drive (and print debug info).

Chapter 9 – Equipment Specifications

Hardware Based Parameters

Analog Inputs

Channel Count	
Deva-5.8	8 x mic / line
Deva-16	8 x mic / line + 4 x line only
Connector	
Mic / Line	XLR-3F
Line	10-pin Hirose
Input Range	
Mic-level	–56 dBu to –26 dBu
Line-level	–10 dBu to +8 dBu
Mic Power	(on Mic input only) 48 VDC phantom (each 10 mA max)
Impedance	
Mic-Level	10 k ohms
Line-Level	4 k ohms
ADC Bit-depth	24
ADC Dynamic Range	117 dB
Clipping Level	+28 dBu
Frequency Response	20 Hz to 22 kHz (@ 48 kHz sampling-rate)
THD + Noise	0.001%

Digital Inputs

Standard	AES3
Channel Count	4 pairs
Connector	mini DB-15
Sample-rate Converters	4 pairs

Analog Outputs

Channel Count	
Deva-5.8	6 x balanced
Deva-16	7 x balanced + 1 x unbalanced
Connector	DB-25
Output Level	0 dBu at –20 dBFS
Clipping Level	+20 dBu
DAC Bit-depth	24
DAC Dynamic Range	112 dB
Impedance	600 ohms

Digital Outputs

Standard	AES3
Channel Count	4 pairs
Connector	mini DB-15

Output Common Items

Source	Mix/Direct (selectable)

Headphones

Connector	1 x 1/4" stereo jack
Dynamic Range	112 dB
Impedance	100 ohms (optimal)
Built-in Soundfield Decoder	Yes
Built-in M/S Decoder	Yes

Other Connectors

External Storage	1 x FireWire 400, 6 wire socket
External Storage Power	1.5 watts
Keyboard	1 x USB, Type A socket (for Zaxcom recommended keyboards)
Wordclock Output	1 x BNC-F
Serial/RS-422	1 x DB-9
Timecode	1 x LEMO-5F
External Power	1 x XLR-4M
Camera Audio	1 x Hirose-10F

Recording

Internal Storage	1 x hard-disk drive
	1 x CompactFlash

Timecode Reader / Generator

Clock Accuracy	1.54 PPM (1 frame out in 6 hours)

Power

Internal	NP-1, 10 to 16.8 VDC
External	10 to 18 VDC @ 1 A

Misc

Internal Slate Mic	Yes
Compatible w/ Mix-12 / Mix-8	Yes

Physical

Operating Environment	
Temp Range	-20 to +60C
Size (H x W x D)	3.78" x 10.8" x 8.1" (96 mm x 274.3 mm x 205.7 mm).
(while looking at screen)	
Weight (w/o battery)	7.4 lbs (2.76 kg)

Controls

On Front

Faders	8 x rotary
Transport	3 x keys (REC, PLAY, STOP)
Multi-function	8 x keys
Number entry	10 x keys (numeric keys)
Slate mic	1 x key
LCD screen	1 x touchscreen
SHIFT / BACKSPACE	1 x key

On Left Side

Power	1 x slide switch

Software Based Parameters

Internal Mixer

Mixer Cross-points	16 in / 24 out (pre-fader, post-fader, phase inversion)
Internal Processing	32-bit floating point DSP

Effects (Optional)

Input Compressor	**(A x 8, D x 8)**
Type	Soft Knee
Attack	1 to 100 ms
Decay	50 to 1000 ms
Threshold	–60.0 to 0.0 dB
Ratio	1.0:1 to 20.0:1
Make-up Gain	0.0 to 20.0 dB
Input Band Filter	**(A x 8, D x 8)**
Bands	3
Types	LO SHELF, HI SHELF, PEAKING
Level	-24.0 to +24.0 dB
Freq Range	30 Hz to 20 kHz
Q	0.5 to 9.9
Input Notch Filter	**(A x 8, D x 8)**
Bands	2
Level	–24.0 to +24.0 dB
Freq Range	30 Hz to 20 kHz
Q	0.5 to 9.9

Effects (Included)

Disk Limiter	
Channel Count	
Deva-5.8	**(x 10)**
Deva-16	**(x 16)**
Attack	0.1 to 100.0 ms
Decay	10 to 1000 ms
Threshold	–20.0 to 0.0 dB
Ratio	4.0:1 to 20.0:1
Make-up Gain	0.0 to 6.0 dB
Input Highpass Filter	**(A x 8, D x 8)**
Freq. Range	Off or 30 to 240 Hz
Input Delay	**(A x 8, D x 8)**
Time Range	0 to 60 ms
Input Limiter	**(A x 8, D x 8)**
(parameters fixed)	Yes, No
Output Limiter	**(x 8)**
Attack	0.1 to 100.0 ms
Decay	10 to 1000 ms
Threshold	–20.0 to 0.0 dB
Ratio	4.0:1 to 20.0:1
Make-up Gain	0.0 to 6.0 dB

Recording

Track Count	
Deva-5.8	10
Deva-16	16
Bit-depth	
Primary Drive	24
Mirror Drive(s)	16 / 24
Sampling-rates (kHz)	44.1, 47.952, 48, 48.048, 88.2, 96, 96.096, 192*

Head Room	12 to 20 dB
Drive Format	
Int. HD drive	MARF (Mobile Audio Recording Format) II
Int. CompactFlash	FAT32
Int. Optical Drive	FAT32
Ext. FireWire Device	FAT32
File Formats	
Int. HD drive	.ZAX
Int. CompactFlash	BWF-M, BWF-P
Int. Optical Drive	BWF-M, BWF-P
Ext. FireWire Device	BWF-M, BWF-P
Dual Disk Recording	Yes
Max Pre-record Duration	10 seconds (48.048 kHz and below)
Compatible Optical Media	DVD-RAM

* Up to 6 tracks max

Timecode Reader / Generator

Timecode Type	SMPTE
Timecode Frame-rates	23.98, 24, 25, 29.97NDF, 29.97DF, 30NDF, 30DF

Chapter 10 – Connector Pinouts

This section provides the pinouts for the connectors on the Deva. The mating cable connector part number is also provided for the less common connectors.

NOTE: All of the diagrams in this chapter show the solder side of each connector.

Power Connector (XLR-4)

The Power Connector on the Deva is a standard 4-pin XLR connector (A4F) available at most electronics stores. The Deva requires a power source of 9.5 to 18 VDC @ 1 A.

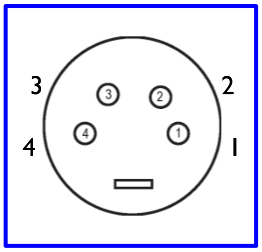


Figure 10-1 XLR-4F Power Connector Pin Numbering

Pin	Description
1	Ground
2	Ground
3	Output: +12 VDC, Max: 3A
4	Input: 9.5 to 18 VDC (+)

Table 10-1 XLR-4F Pin Description

NOTE: Pin-3 is connected to the battery. If there is no battery, no power is available. It can handle up to a 3 A load. It **IS** controlled by the main power switch.

The key thing to remember here is: If you plan on running from a cart power supply and you wire up to use pin-3, the internal battery will be run down before you might need to use it! So, reserve it for bag use only!

Headphone Output Connector (1/4" stereo plug)

(need art for 1/4" stereo plug)

Figure 10-2 Headphone Plug Connections

Pin	Description	Pin	Description	Pin	Description
Tip	Channel A	Ring	Channel B	Sleeve	Ground

Table 10-2 Headphone Plug Pin Description

Analog Input / Output Connectors (XLR-3)

When building an analog cable, use balanced XLR cable.

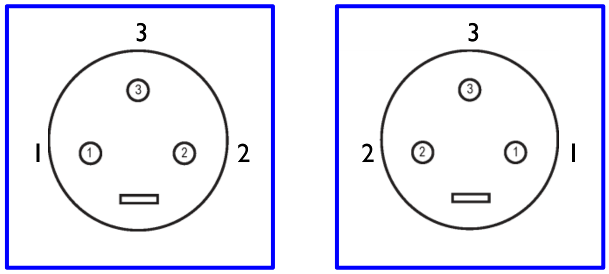


Figure 10-3 XLR-3M (Left) and XLR-3F (Right) Audio Input & Output Connector Pin Numbering

Pin	Description	Pin	Description	Pin	Description
1	Ground (**X** – shield)	2	(+) / Hot (**L** – live)	3	(–) / Cold (**R** – return)

Table 10-3 XLR-3 Pin Description

At this point, I imagine you are looking at your Deva and saying "My Deva doesn't have any analog output connectors". Well, you're correct. The purpose of this section is to show the less informed individuals the difference in pin numbering between the two kinds of connectors.

Also one more bit of information. You all know this but I just need to write it here to get it out of the way.

The connector pins point away from the microphone and toward the device at the far end.

"What?" you say. A standard microphone (without a separate power supply/control interface) has a male connector (XLR-3M) and the device (i.e., recorder) has a female microphone input connector (XLR-3F). This also works for line-level devices. Now, continue the concept past the recorder to a speaker. If there WAS an analog XLR output connector on the Deva it would be a male (XLR-3M) and the speaker connector (XLR-3F). But wait, the optional analog cable set has … wait for it … XLR-3M connectors on the "far end", just as if it was a chassis mounted connector but without taking up valuable chassis real-estate.

What is the intent of all this? To make sure that when you're building cables, you're following the industry standard for the connector's gender.

One last and final concept (I promise). Everything just described ALSO applies to the digital realm.

Analog Output Connector (DB-25)

This is a standard DB-25 connector available at most electronics part stores. Channel 8 is unbalanced.

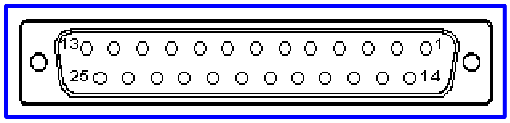


Figure 10-4 DB-25M Analog Output Connector Pin Numbering

Pin	DESC	Pin	DESC	Pin	DESC
1	Ch1,Pin-2	10	Ch5, Pin-3	19	NC
2	Ch1, Pin-1	11	Ch6, Pin-2	20	Ch4, Pin-1
3	Ch4, Pin-3	12	Ch5, Pin-1	21	Ch3, Pin-3
4	Ch5, Pin-2	13	NC	22	Ch4, Pin-2
5	Ch3, Pin-1	14	Ch2, Pin-3	23	Ch7, Pin-1 Ch8, Pin-1 Ch8, Pin-3
6	NC	15	Ch3, Pin-2	24	Ch7, Pin-2
7	Ch1, Pin-3	16	Ch2, Pin-1	25	Ch8, Pin-2
8	Ch2, Pin-2	17	Ch6, Pin-3		
9	Ch6, Pin-1	18	Ch7, Pin-3		

Pinouts for Deva-16

Pin	DESC	Pin	DESC	Pin	DESC
1	Ch1,Pin-2	10	Ch5, Pin-3	19	Gnd
2	Gnd	11	Ch6, Pin-2	20	Gnd
3	Ch4, Pin-3	12	Gnd	21	Ch3, Pin-3
4	Ch5, Pin-2	13	Gnd	22	Ch4, Pin-2
5	Gnd	14	Ch2, Pin-3	23	Gnd
6	Gnd	15	Ch3, Pin-2	24	Gnd
7	Ch1, Pin-3	16	Gnd	25	Gnd
8	Ch2, Pin-2	17	Ch6, Pin-3		
9	Gnd	18	Gnd		

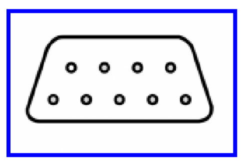
Pinouts for Deva-5.8

Table 10-4 DB-25M Pin Description

NOTE: In the Description columns above, the reference to "Pin-?" refers to connections to industry standard 3-pin XLRs, which are described in ***Analog Input / Output Connectors (XLR-3)*** {**p.174**}

Serial/GPI Connector (DB-9)

The Deva uses a mini DB-9 connector for the Serial/GPI connector.



Top row pins: 6, 7, 8, 9
Bottom row pins: 1, 2, 3, 4, 5

Figure 10-5 Mini DB-9 15M Serial/GPI Connector Pin Numbering

Pin	DESC	Pin	DESC
1	RS-422 RX-	6	RS-422 RX+
2	RX-232	7	GPI IN 2 (unused)
3	TX-232	8	RS-422 TX-
4	GPI IN 1	9	RS-422 TX+
5	GROUND		

Table 10-5 Mini DB-9M Pin Description

Line In / Camera Connector (Hirose-10)

No matter which unit you are operating, the "far end" of the cable has to be connected to an audio source or an audio sink.

If you are connecting a Deva-5.8 to a camera with another 10-pin Hirose connector, well that's all you need. Just be sure that the pin-outs on the camera side match the pin-outs below.

If you are connecting a Deva-5.8 to a camera which has only 3-pin XLR connectors, obviously then the description and Notes column indicate which pin of which XLR connector is connected to that wire.

If you are connecting a Deva-16 to several mics (up to 4) through this connector, obviously your only option is to use 3-pin XLR connectors.

Deva-5.8

The Camera connector is provided as a camera output and a camera return into the recorder. The camera returns on pins 5 and 7 are summed to mono. {Connector P/N: RM15TPD-10P(71)}

Deva-16

The Line In connector provides line-level inputs 9 – 12. {Connector P/N: RM15TPD-10P(71)}

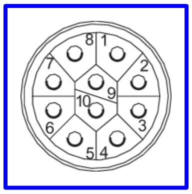


Figure 10-6 Hirose-10M Line In / Camera Connector Pin Numbering

Pin	DESC
1	Ch09 (Ch1), Pin-2
2	Ch09 (Ch1), Pin-3
3	Ch10 (Ch2), Pin-2
4	Ch10 (Ch2), Pin-3
5	Ch09 (Ch1), Pin-1 Ch10 (Ch2), Pin-1
6	Ch11 (Ch3), Pin-2
7	Ch11 (Ch3), Pin-3
8	Ch12 (Ch4), Pin-2
9	Ch12 (Ch4), Pin-3
10	Ch11 (Ch3), Pin-1 Ch12 (Ch4), Pin-1

Deva-16 (Input)

Pin	DESC	Notes
1	Ch05, Pin-2	Output #1 to camera (Pin-2)
2	Ch05, Pin-3	Output #1 to camera (Pin-3)
3	Ch06, Pin-2	Output #2 to camera (Pin-2)
4	Ch06, Pin-3	Output #2 to camera (Pin-3)
5	Camera return 1	Summed to mono with camera return 2
6	NC or +12v	optional 12v
7	Camera return 2	Summed to mono with camera return 1
8	NC or TC	optional TC
9	NC or Gnd	
10	NC or Gnd	

Deva-5.8 (Input & Output)

Table 10-6 Hirose 10-Pin Description

NOTE: In the Description and Notes columns above, the reference to "Pin-?" refers to connections to industry standard 3-pin XLRs, which are described in ***Analog Input / Output Connectors (XLR-3)*** {**p.174**}

Timecode Connector (LEMO-5)

The timecode connector on the Deva is a 5-pin LEMO connector. The cable end p/n is: FGG.0B.305.CLAD42Z. The "42" is the cable diameter; this can be adjusted, within limits. Visit: **http://intra.lemo.ch/WD140AWP/WD140Awp.exe/CONNECT/PartSearch?p1=partNumber** and explore the possibilities.

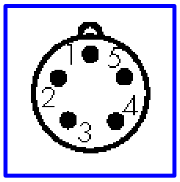


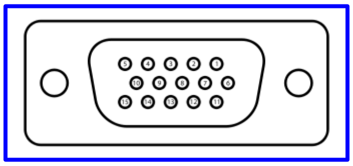
Figure 10-7 LEMO-5M Timecode Connector Pin Numbering

Pin	DESC
1	Gnd
2	TC In
3	NC
4	NC
5	TC Out

Table 10-7 LEMO-5M Pin Description

AES Digital Input / Output Connectors (DB-15)

The Deva uses a mini DB-15 (AKA: DE-15) connector for the AES (digital) input and output connectors.



Top row pins: 5, 4, 3, 2, 1
Middle row pins: 10, 9, 8, 7, 6
Bottom row pins: 15, 14, 13, 12, 11

Figure 10-8 Mini DB-15M Digital Input and Output Connectors Pin Numbering

Pin	DESC	Pin	DESC
1	Ch3/4, Pin-2	9	Ch7/8, Pin-1
2	Ch1/2, Pin-2	10	Ch5/6, Pin-1
3	NC	11	Ch3/4, Pin-3
4	Ch7/8, Pin-2	12	Ch1/2, Pin-3
5	Ch5/6, Pin-2	13	NC
6	Ch3/4, Pin-1	14	Ch7/8, Pin-3
7	Ch1/2, Pin-1	15	Ch5/6, Pin-3
8	NC		

Table 10-8 Mini DB-15M Pin Description

NOTE: In the Description columns above, the reference to "Pin-?" refers to connections to industry standard 3-pin XLRs, which are described in **Analog Input / Output Connectors (XLR-3)** {**p.174**}.

Chapter 11 – Firmware Information

Firmware

Each Deva is shipped with the latest firmware version installed. As newer firmware becomes available, it can be downloaded from the Zaxcom website (***http://www.zaxcom.com/software-updates***).

Each time a unit is powered up, the firmware version number is displayed briefly on the LCD screen.

Advantages to Upgrading the Firmware

By upgrading the software, the range and feature set have and will continue to dramatically increase over time. Zaxcom has a reputation for constantly adding additional features and user suggestions during the product's lifetime. This ensures that your digital recorder will perform better and better, the longer you own it.

Upgrading the Firmware in Each Unit

Use the steps listed to update the firmware on your Deva. The program file is always named DevaProgFile.bin. The procedure for upgrading the firmware places it first into temporary DRAM, and then flashes it to the ROM. This is the safest way to upgrade the firmware since you will always be able to boot the Deva should something go wrong during the firmware update process

1. Download the updated Firmware.
2. Depending on which media you will be using, perform one of the following:
    a. For CD-R, DVD-R or DVD-RAM – Burn the firmware to it.
    b. For a hard disk drive – Save a copy of the firmware to the root folder.
    c. For the CF card:
        i. Using the Deva's Mirror Slot, format a spare CF card.
        ii. In the SD adapter on your PC, save the firmware to the CF card.
3. Depending on which media you will be using, perform one of the following:
    a. For an external FireWire device:
        i. Connect the FireWire device to the Deva's FireWire port (CD-R / DVD-R / DVD-RAM / ext HDD).
        ii. Power-up the Deva.
        iii. Go to the ***My Deva page*** {**p.112**}.
        iv. In the ***Firewire Power*** *button*, select **On**.
        v. If necessary, insert the FireWire media you created in step 2.
        vi. Go to the ***Mirror Drive page*** {**p.120**}.
        vii. In the ***Mirror Mode*** *button*, select **Off**.
        viii. If necessary perform the following:
            1. Go to the ***My Deva page*** {**p.112**}.
            2. In the ***Mirror Drive Select*** *button*, select **Firewire**.
            3. When the system displays the dialog: "Do you want to restart now? Yes or No", answer **Yes**.
            4. The system reboots.
    b. For the CompactFlash Mirror drive:
        i. Insert the card you loaded in step 2.
        ii. Go to the ***Mirror Drive page*** {**p.120**}.
        iii. In the ***Mirror Mode*** *button*, select **Off.**
        iv. If necessary perform the following:
            1. Go to the ***My Deva page*** {**p.112**}.
            2. In the ***Mirror Drive Select*** *button*, select **Compact Flash**.
            3. When the system displays a dialog asking: "Do you want to restart now? Yes or No", answer **Yes**.
            4. The system reboots.

4. Perform the following to install the new firmware:

   a. Go to the ***Main Menu page*** {**p.40**}.
   b. Enter **036** using the numeric keys.
   c. Go to the ***Setup page*** {**p.60**}.
   d. Press the ***Service*** *button* (the ***Deva Service Menu Warning page*** {**p.140**} is displayed).
   e. Depending on what media you are using to install the software (basically whether or not its format is recognized), perform one of the following:

      i. If the format is unrecognized (CD-R or DVD-R), press the ***Load From CD-R*** *button*.
      ii. If the format is recognized (hard disk drive, CF card or DVD-RAM), press the ***Load ProgFile*** *button*.

   f. The ***Debug Screen dialog box*** {**p.141**} is displayed and the following appears on it. The process takes about 5 seconds:

```
Starting ReadDevaProgramFile
opened Deva prog file
imported 5MB at 2562kB/sec Version String:
DateTimeVer:mmm dd yyyy
hh:mm:ss
vX.XX
Calculating Checksum…size=0x00500000 Vs: <X><XX>
DevaProgFile.bln is now in temporary memory
```

Figure 11-1 Firmware Install Part 1

The "vX.XX" line indicates the version of the firmware being loaded. This number appears again on the second line from the bottom.

The "DateTimeVer:" line and the line that follows, indicate the date and time the version was created.

The last line indicates that the firmware was successfully installed in temporary memory.

   g. Press the ***Burn Program ROM*** *button*.
   h. The ***Debug Screen*** *dialog box* is cleared and the following appears on it. The process takes a little over three minutes:

```
... BurnBigROM() ...
 Erasing 81 ROM sectors (5308kB)
..........................
Writing Deva Program to ROM...
...............................................
 ReadBackTest:Checking BootROM...
BURN-ROM task finished **TURN POWER OFF NOW**
```

Figure 11-2 Firmware Install Part 2

> **IMPORTANT:** Do not power down the Deva until the page indicates that you can.
> If you do … and the unit will not boot up, you **WILL** have to send the unit back to Zaxcom to have it repaired.

   i. Cycle the power to run on the newly installed firmware.
   (You have successfully completed the installation … HAVE FUN with the new version!!!)

Firmware History

==
V7.52 2012-04-05
Changed disk drivers to support more CF cards

==
V7.51 2012-02-21
Fixed random headphone beep when going into record
Fixed compressors from changing tone level

==
V7.50 2011-11-10
Fixed continuous mirror mode's reluctance to start mirroring the 1st segment in a folder

==
V7.49 2011-11-10
Added some restrictions needed for using a Mix-8
Added a specific Mix-8 selection in the Setup page

==
V7.47 2011-07-28
Fixed low battery warning bug.. The fractional part of the setting was being truncated after a power cycle. For example: 13.5V was being changed to 13.0V after a power cycle.

==
V7.46 2011-06-20
Added Support for ZaxNet Power Roll feature (requires v7.35 in TRX or v1.36 in QRX IFB option)
Added Power Roll button to ZaxNet page

==
V7.45 2011-04-11
Fixed problem with not remembering the digital input trim settings after a power cycle.

==
V7.44 2011-03-18
Fixed Mirroring – missing iXML CHANNEL and INTERLEAVE INDEX when the Operator does not name a particular track. This is required while using IXML PRO software by Gallery.

==
V7.42 2011-01-21
Fixed unpredictable changes in Camera and Slate gain

==
V7.41 2010-12-07
Fixed (Mix-12 section) digital fader assignment bug (again)
Changed turning 'ON' Mix-12 support no longer requires reboot

==
V7.37 2010-10-25
Fixed (Mix-12 section) some fader assignment bugs
Changed several places that should not be apparent to the Operator

==
V7.36 2010-09-13
Changed headphones Record Start and Stop beeps change volume along with headphone volume control

==
V7.35 2010-09-12 EXPERIMENTAL
Added additional recording safety measures

==
V7.34 2010-09-10 EXPERIMENTAL
Fixed no longer allow playing back an empty folder (could crash)

==
V7.33 2010-09-10 EXPERIMENTAL
Fixed problem with record warning beep while Headphone Alarm is activated

==
V7.32 2010-09-07 EXPERIMENTAL
Fixed Headphone alarm tones feature
Added headphone alarm for frozen record process

==
V7.31 2010-09-03 EXPERIMENTAL
Fixed FREE_MIS1_ERR message

==

V7.30 2010-08-10 EXPERIMENTAL
Fixed Slate mic trim bug
Fixed Mix12 slate screen interaction problem
Fixed Missing keypad shortcut
Fixed Mix12 fader assignment bug
Fixed Meter gray-out bug
Changed FAST DSP speed behavior on boot up
Fixed Missing "Done" message on sound report generation button

==
V7.12 2010-05-07 EXPERIMENTAL
Fixed Fast-forward and Rewind buttons in the Cue page

==
V7.10 2010-05-03 EXPERIMENTAL
Fixed Annoying noise when restarting the unit

==
V7.09 2010-03-16 EXPERIMENTAL
Fixed problem with Mix-12 / Mix-8 fader movement slowing down recording process
Changed expanded output routing to allow routing copies of outputs (to reduce duplicated crosspoints)

==
V7.08 2009-12-16 **ZAXNET BETA VERSION** EXPERIMENTAL
Changed Moved ZaxNet button to the left to avoid changes during touchscreen malfunction

==
V7.05 UNKNOWN EXPERIMENTAL
Fixed Aux Line input trim 1 – 4 which were not being updated after a power cycle
Changed Allow over-clocked (by 10%) DSP speed (320MHz) when the #2 key is held during boot-up
Fixed Battery screen index
Fixed Meter label entry screen tab bug
Changed Now properly updates limiter crosspoint display
Fixed decimal point entry in battery meter screen (use backspace key)

==
V7.03 UNKNOWN EXPERIMENTAL
Fixed Was not properly saving the trim mode on digital inputs.

==
V6.08K UNKNOWN
Changed No longer send ZaxNet commands while displaying the Timecode page (for non ZaxNet compatible slates).

==
V6.08F UNKNOWN
Added Low battery warning on boot up (9.0 volts).

==
V6.06C UNKNOWN
Added F6 (INPUT key on Fusion) boot key: causes a folder recovery operation.
NOTE: the recovered folder info is NOT written to the drive unless a recording is made in that folder!

==
V6.03U 2009-06-26
Changed Better free space left on mirror disk indicator on Mirror Drive Status button

==
V6.02U 2009-06-25
Changed potential bug in GUI that could cause a crash
Added free space left on mirror disk indicator on Mirror Drive Status button (FAT32 disks only)

==
V6.00U 2009-06-16
Changed FireWire library to check for the corrupted sector that Sam Hecht drive creates
NOTE: should fix the need to format DVD-RAM disk twice bug related to the Sam Hecht drive

==
v5.99U 2009-03-14
Added output routing features
Changed the saving of some EQ settings
Changed digital HPF (was not filtering the digital inputs)
Changed memory leaks in DiskMix, OutputMix and Headphone pages

==
v5.65U 2009-03-06
Changed Automatic Take increment to prevent loss if STN metadata
Changed Deva16 with mirroring more than 14 mono WAV files at a time
Added fix to allow mirroring to continue even after an audio error (from 5.44O)
Changed Brightness Default setting after a Factory Restore Defaults

==

v5.64U 2009-02-25

Changed	Fusion-12 only having 10 tracks
Changed	problem with turning OFF mirror mode with UDF formatted disks
	NOTE: UDF disks cannot mirror in continuous mode
Changed	Attempted to fix default brightness problem (defaults to lowest brightness setting)
Changed	Addressed ERASE_5_ERR and F32_LinkC1_WARN during format of internal disk
Added	re-try for link cluster warning
Added	Warning if format internal disk had a problem with a link cluster

==

v5.62U 2009-02-10

Changed	Compressor's Decay and Attack settings (Not restored after power cycle)
Changed	Format Drive so it makes wrapper files that can be copied on a PC
Added	Extra two optical meters on Home page
Changed	Minor EQ changes
Changed	Allow metering of analog/digital inputs/outputs on Home and Cue pages
Removed	extraneous soloing of post-fader analog and digital channels
Changed	Mix12 communications and recognition. Only look for Mix12 when the Mix12 switch is ON
Deleted	keyboard wake-up fix to prevent sluggishness when the keyboard is unexpectedly removed
Added	option codes for the Fusion-10
Changed	WAV metadata name to always be "Deva5" instead of "Deva" to prevent the Fostex DV824 from misrepresenting the timecode (48k, 29.97)
Added	free upgrade for all Fusion-8 to 10 ch
Changed	Headphone preset crash partial
Changed	Limiters latching up after PLAY (96 kHz horsepower performance may be degraded)
Changed	Mix8 checksum bug (faders on mix8 would not work)
Changed	Fusion-12 code (major crash bug fix)
Added	New LCD switch (hold the "4" key during boot to toggle the display type)

==

Chapter 12 – Zaxcom Warranty Policy and Limitations

Zaxcom Inc. values your business and always attempts to provide you with the very best service.

No limited warranty is provided by Zaxcom unless your Zaxcom Deva ("Product") was purchased from an authorized distributer or authorized reseller. Distributers may sell Products to resellers who then sell Products to end users. Please see below for warranty information or obtaining service. No warranty service is provided unless the product is returned to Zaxcom Inc. or a Zaxcom dealer in the region where the Product was first shipped by Zaxcom.

Warranty Policy

The Product carries a Standard Warranty Period of one (1) year.

NOTE: The warranty period commences from the date of delivery from the Zaxcom dealer or reseller to the end user.

There are no warranties which extend beyond the face of the Zaxcom limited warranty. Zaxcom disclaims all other warranties, express or implied, regarding the Products, including any implied warranties of merchantability, fitness for a particular purpose or non-infringement. In the United States, some laws do not allow the exclusion of the implied warranties.

Troubleshooting & Repair Services

No Product should be returned to Zaxcom without first going through some basic troubleshooting steps with the dealer you purchased your gear from.

To return a product for repair service, go to the Zaxcom Repair Services page (***http://www.zaxcom.com/repairs***) and fill in your information; there is no need to call the factory for an RMA. Then send your item(s) securely packed (in the original packaging or a suitable substitute) to the address that was returned on the Repair Services page. Insure the package, as we cannot be held responsible for what the shipper does.

Zaxcom will return the warranty repaired item(s) via two-day delivery within the United States at their discretion. If overnight service is required, a FedEx or UPS account number must be provided to Zaxcom to cover the shipping charges.

*Please note, a great resource to troubleshoot your gear is the Zaxcom Forum: ***http://www.zaxcom.com/forum***.

Warranty Limitations

Zaxcom's limited warranty provides that, subject to the following limitations, each Product will be free from defects in material and workmanship and will conform to Zaxcom's specification for the particular Product.

Limitation of Remedies

Your exclusive remedy for any defective Product is limited to the repair or replacement of the defective Product.

Zaxcom may elect which remedy or combination of remedies to provide in its sole discretion. Zaxcom shall have a reasonable time after determining that a defective Product exists to repair or replace a defective Product. Zaxcom's replacement Product under its limited warranty will be manufactured from new and serviceable used parts. Zaxcom's warranty applies to repaired or replaced Products for the balance of the applicable period of the original warranty or thirty days from the date of shipment of a repaired or replaced Product, whichever is longer.

Limitation of Damages

Zaxcom's entire liability for any defective Product shall, in no event, exceed the purchase price for the defective Product. This limitation applies even if Zaxcom cannot or does not repair or replace any defective Product and your exclusive remedy fails of its essential purpose.

No Consequential or Other Damages

Zaxcom has no liability for general, consequential, incidental or special damages. These include loss of recorded data, the cost of recovery of lost data, lost profits and the cost of the installation or removal of any Products, the installation of replacement Products, and any inspection, testing or redesign caused by any defect or by the repair or replacement of Products arising from a defect in any Product.

In the United States, some states do not allow exclusion or limitation of incidental or consequential damages, so the limitations above may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

Your Use of the Product

Zaxcom will have no liability for any Product returned if Zaxcom determines that:

- The Product was stolen.
- The asserted defect:
  1. Is not present,
  2. Cannot reasonably be fixed because of damage occurring when the Product is in the possession of someone other than Zaxcom, or
  3. Is attributable to misuse, water damage, improper installation, alteration, including removing or obliterating labels and opening or removing external covers (unless authorized to do so by Zaxcom or an authorized Service Center), accident or mishandling while in the possession of someone other than Zaxcom.
- The Product was not sold to you as new.
- Non Zaxcom supplied parts and/or modifications were installed.

Additional Limitations on Warranty

Zaxcom's warranty does not cover products, which have been received improperly packaged, altered or physically abused.